Recreation and Tourism in South-Central Alaska: Patterns and Prospects

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United States Department of Agriculture
Forest Service
Pacific Northwest Research Station
General Technical Report
PNW-GTR-551
October 2002

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Abstract

Colt, Steve; Martin, Stephanie; Mieren, Jenna; Tomeo, Martha. 2002. Recreation and tourism in south-central Alaska: patterns and prospects. Gen. Tech. Rep. PNW-GTR-551. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 78 p.

Based on data from various sources, this report describes the extent and nature of recreation and tourism in south-central Alaska. Current activities, past trends, and prospective developments are presented. Particular attention is given to activities that occur on, or are directly affected by management of, the Chugach National Forest. Recreation and tourism in and around the forest are also placed in a larger context. The Chugach National Forest is heavily used as a scenic resource by motorists and waterborne passengers; road access to the forest supports recreation activities such as fishing, camping, hiking, and wildlife viewing. Although the annual rate of increase in visitors to south-central Alaska seems to have slowed in the late 1990s, evidence indicates that currently both visitors and Alaska residents are increasingly seeking active forms of recreation and "soft adventure." These demands, combined with likely capacity constraints at well-known attractions in Alaska and entrepreneurial efforts to provide short-duration recreation and tourism experiences, may lead to increasing use of the Chugach National Forest.

Keywords: Tourism, recreation, south-central Alaska, Chugach National Forest, land management planning.

Contents

Chapter 1: Introduction and Methods

Introduction

This report describes the extent and nature of recreation and tourism activities within south-central Alaska. We consider current activity levels, past trends in participation in these activities, and future prospects for change. We focus particularly on recreation and tourism activities on the Chugach National Forest, while attempting to place these activities within a larger regional context.

Although difficult to measure, tourism and recreation is the only basic economic sector in Alaska that has grown steadily since statehood (Goldsmith 1997). Because it is fundamentally tied to worldwide population and income, the sector has the potential for significant growth. Future growth in the demand for recreation and tourism opportunities on the Chugach National Forest presents both challenges and opportunities to forest planners. Successful planning requires a solid empirical understanding of both current patterns and past trends in recreation and tourism activities throughout south-central Alaska. This report describes our attempts to collect, compile, and extract the available data to provide this empirical foundation.

Study Area and Time Period

The study area extends east and south from the Alaska Range, through the Talkeetna and Chugach Mountains and Prince William Sound, and into the Wrangell-St. Elias Mountains ending at the Canadian border (fig. 1). For statistical analysis purposes, it encompasses the following places: Kenai Peninsula Borough, Municipality of Anchorage, Matanuska-Susitna Borough, and the Valdez-Cordova Census Area.

Kodiak Island is excluded from the study area. Although it contains significant wildland resources, it is a fundamentally different market as the island is not visited by large cruise ships and is largely inaccessible to the major population centers of Alaska.

We considered past trends over the 10-year period from 1989 to 1998. For many sources, a full 10 years of data are not available or feasible to collect. In these cases, we used 1989 (or 1988), 1993, and 1998 as benchmark years that capture the 10-year trend. When considering the future, we generally asked interview sources to speculate about the next 5 to 10 years.

Challenges in Measuring Recreation and Tourism

Recreation and tourism activities are not classified as distinct economic sectors by standard economic data systems such as the standard industrial classification system. This is mainly because recreation and tourism activities are defined by their purpose rather than by the nature of goods and services consumed. In economics jargon, we could say that the recreation and tourism industry is defined by the source of demand rather than the nature of the supply. For example, there is no simple way to know whether a given tank of gasoline is being sold to someone engaging in a recreation or nonrecreation activity; also, that same tank of gasoline may be used by the same person for recreational purposes one day and for nonrecreational purposes on another day.

In addition, the consumer of tourism and recreation experiences often purchases several goods and services and uses them as inputs to "produce" the experience. For example, an angler might fly to Anchorage; rent a car; purchase gasoline, food, and a fishing license; drive to the Kenai River; and go fishing with a licensed guide. Only in the rare case where all these inputs are first purchased by an entrepreneur and then resold as a complete package to a final consumer can we measure the level of recreation and tourism activity as the economic output of a conventional industry. In practice, such opportunities are rare in the standard economic data on sales, wages, employment, etc. As a result, the recreation and tourism sector of the economy is less visible, and its importance may be more difficult to measure than that of other industries.

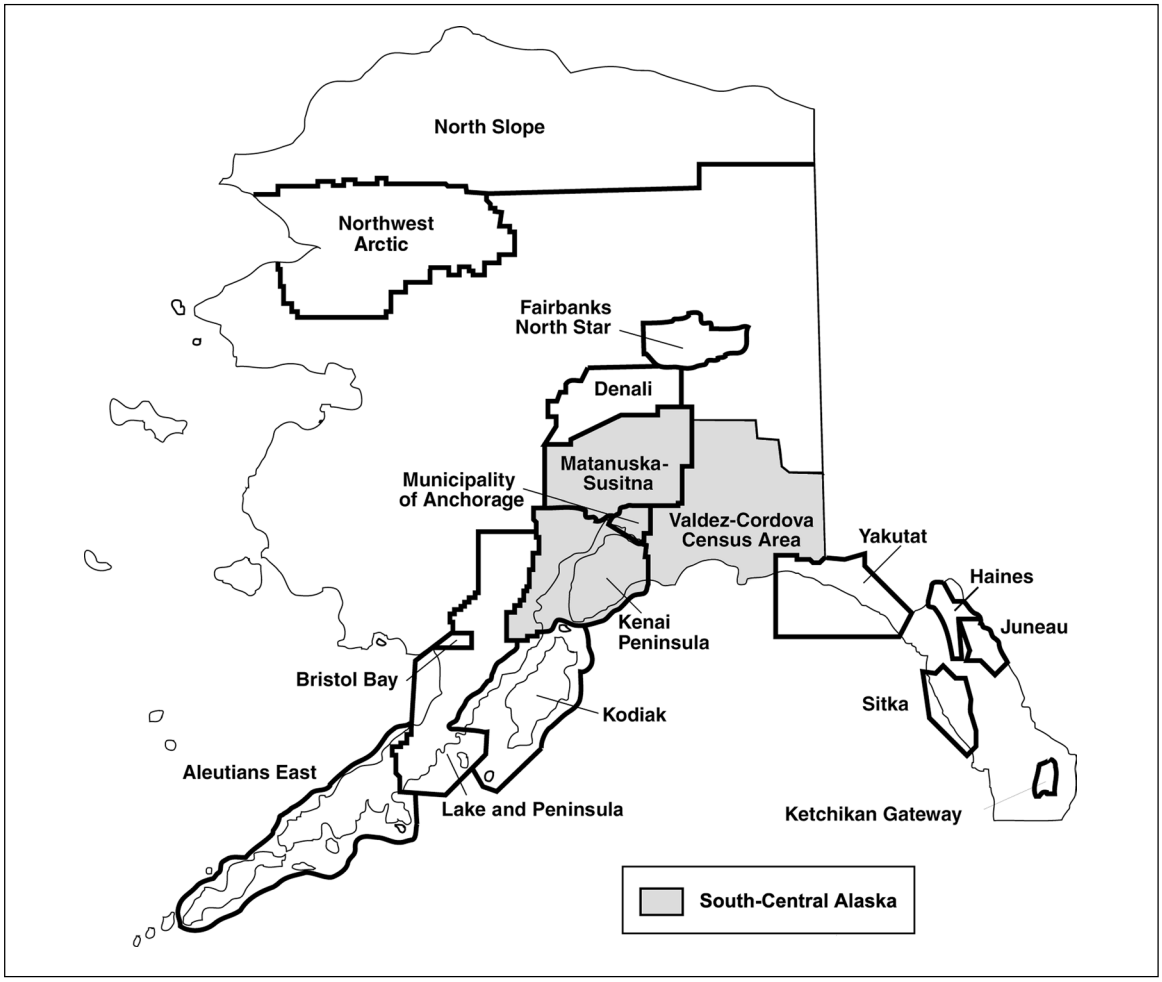

Figure 1—Alaska and the south-central region.

To overcome this problem, economic analysts usually resort to two complementary approaches. First, they try to use survey data to determine actual activity patterns and the associated economic expenditures, including the participant's time. Second, they use either the survey data or other information to allocate parts of the output of the conventionally measured economic sectors to the recreation and tourism category.

Methods

Data Sources

Because of time and resource constraints, we did not use additional survey research. Instead, we relied on various existing quantitative data sources and interviews to present an overview of recreation and tourism activities.

The quantitative data sources we used for this study include:

- Chugach National Forest recreation use data
- National Park Service use data
- Alaska State Parks use data
- Alaska Visitor Statistics Program reports
- Regional Convention and Visitors Bureau data and studies
- Alaska Department of Transportation traffic counts
- Alaska Department of Fish and Game angler surveys and license data

- Alaska Department of Community and Economic Development business license files
- Alaska Department of Safety vehicle registration records
- Alaska cities and boroughs with sales and bed taxes
- Previous surveys and special studies for specific purposes or clients
- Prince William Sound kayak use database (generated as a special study and updated for this report).

The interviews include more than 120 semistructured conversations with industry operators, longtime observers, community residents, and agency staff (see app. 2).

Analysis Methods

We used two principal approaches to analyze the collected data and information. First, we used simple statistical and graphical techniques to show the relation of our data to recreation and tourism in particular places. Second, we tried to combine and compare the information from different sources to draw internally consistent conclusions about the past, present, and future of the recreation and tourism industry in south-central Alaska.

Organization of This Report

In Chapter 2 we present and discuss data that describe recreation and tourism activities on the Chugach National Forest. We then present a data set on recreational back-country use in western Prince William Sound. This is a rapidly growing activity and serves as an indicator of larger patterns of change.

With a tentative, quantitative concept of recreation and tourism use patterns on the Chugach National Forest established, we review other quantitative data from throughout south-central Alaska in Chapter 3. This provides a regional perspective for the observed recreation and tourism patterns on the Chugach National Forest. After the quantitative review, we extract the qualitative data from our interviews in Chapter 4 and consider how these perspectives support or refute the hypotheses suggested by the quantitative data.

Finally, in Chapter 5 we draw some general conclusions from the evidence and speculate about the implications these conclusions may have for future recreation and tourism activities in south-central Alaska and on the Chugach National Forest.

End of Part A. Click here for Part B.

Part B — continued from Part A

Chapter 2: Recreation and Tourism on the Chugach National Forest and Western Prince William Sound

The Chugach National Forest

We describe recreation and tourism use of the Chugach National Forest based on information from several key data sources maintained by the Forest Service. After listing our data sources, we discuss the limitations of the data. We next describe overall trends in recreation and tourism use. And finally, we look at the data in more detail, asking the questions, How do people get to the forest? and What do they do when they get there? We present information from two Chugach National Forest visitor surveys on the factors visitors reported as being important to the quality of their recreation experience.

Our analysis is based on the following data sources:

- Recreation information management (RIM) system reports for 1989 through 1996 and infrastructure system (Infra) reports for 1997 and 1998. These reports constitute the standard information flow generated by Chugach National Forest staff and transmitted to regional and national offices for use in annual planning and budgeting exercises (USDA Forest Service 1999b).[1]
- Raw data used as inputs to the RIM process, including trail registries, campground and cabin concessionaire reports, fishing and hunting license data, cruise ship passenger counts, and highway traffic counts (USDA Forest Service 1999c).
- Use reports from outfitters and guides and others operating under special use permits. We compiled these data from the permit files kept by the Seward, Glacier, and Cordova Ranger Districts (USDA Forest Service 1999d).
- The 1995 Chugach National Forest recreation survey (USDA Forest Service 1995a, 1995b).
- The Chugach National Forest portion of the 1992 Forest Service "CUSTOMER" nationwide recreation survey (USDA Forest Service 1992).

[1] The RIM/Infra data are based on passenger, traffic, and facilities use counts from many sources; they were adjusted following the 1995 survey. The RIM and Infra data are presented as recreation visitor days (RVDs). Each visitor is assigned a share of a day corresponding to that person's activity. For example, a hiker is assigned 0.325 RVDs corresponding to 3.9 hours for hiking.

Data Limitations

There are several data limitations in many areas that prevent us from drawing firm conclusions about recreation and tourism use patterns. Most important is the fact that from 1989 through 1998, there are only a few activities for which new raw data were collected each year as part of the RIM process. These are viewing scenery, camping, use of cabins, and number of visits to visitor centers. For other activities, there are significant periods during which no new data were available; in such cases the total from the previous year is carried forward in the reports. These periods show up in our figures as periods of no change.

Between 1995 and 1997, there were significant changes in RIM data collection and computation methods. The Forest Service adopted new recreation use conventions in 1996. In 1997, several activity definitions and methods for calculating specific activity levels were changed. For these reasons, we do not calculate trend growth rates or show trends that cross this period for the activities that were significantly affected by these changes.

Generally, the data tied to facilities use, fee collections, or special use permits are better than the data on dispersed and noncommercial use.

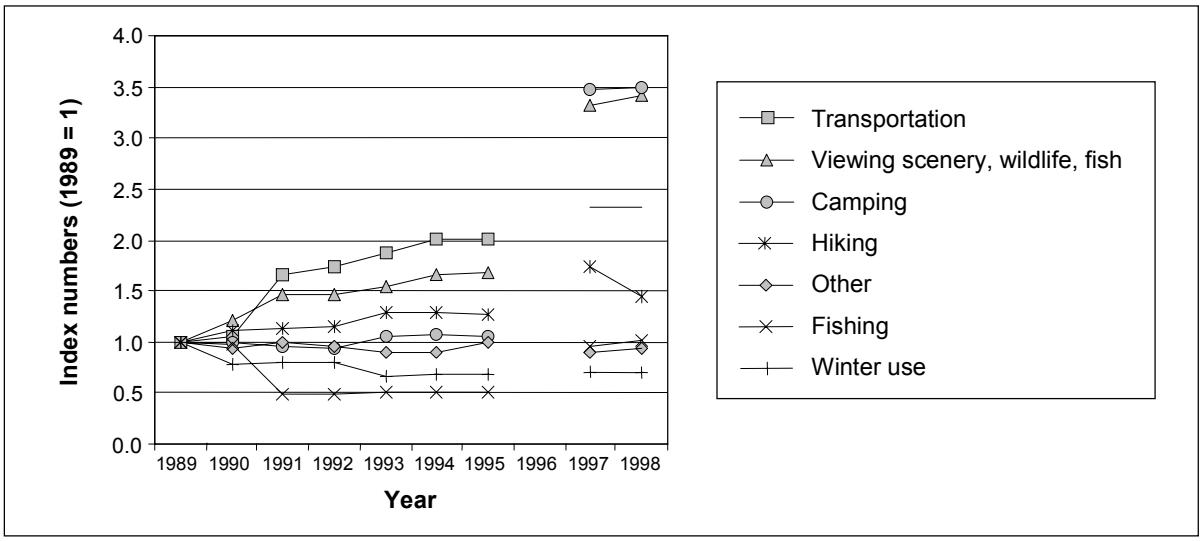

Figure 2—Trends in major activities on the Chugach National Forest, 1989–98 (USDA Forest Service 1999b).

Conclusions about multiple activities considered together are most reliable.

Special use permit data are likely to be incomplete. Because permit holders in the Glacier Ranger District do not report use by activity, we estimated clients in each activity based on total clients and length of stay estimates. Permit holders self-report revenue and use. Because permit fees are based on revenue, there may be some underreporting.

Finally, the 1992 and 1995 survey data are not directly comparable. Activity definitions and questions are different in the two surveys. Nonetheless, the results show some clear patterns.

Findings

Overall, the data confirm the findings reported by many on-the-ground observers: the Chugach National Forest is heavily used as a scenic resource by motorists and waterborne passengers and increasingly as a road-accessible playground for fishing, camping, and commercially mediated, motor-assisted recreation.

The RIM data summarized in figure 2 show that, excluding travel, more than half of the time (recreation visitor days) people spend on the Chugach National Forest is spent viewing scenery, wildlife, and fish. Viewing is the most popular activity in all ranger districts and has been increasing steadily since 1989. Hiking also seems to be growing, whereas camping is roughly flat, consistent with capacity constraints. Fishing and winter use are shown in figure 2, but many data problems make it difficult, if not impossible, to infer broad trends from these data. Active sports such as mountain biking and whitewater rafting seem to be growing fastest among summer activities. Extremely rapid growth is a common trend when the initial base is small, as is the case for these two activities.

The special use permit data show that commercially mediated recreation is occurring increasingly on the forest, but we do not know whether this growth outpaces the growth of dispersed, independent recreation. Figure 3 shows that although the overall numbers of clients in activities conducted under special use permits almost doubled between 1994 and 1998, the increase in camping, kayaking, and hiking grew much faster than the overall average. Much of the guided camping activity is linked to sea kayaking, and the small numbers of whitewater rafters are hidden in the rafting data by the large numbers of Kenai River floaters. Hence, the index numbers for some activities in figure 3 probably understate the actual growth in active adventure recreation.

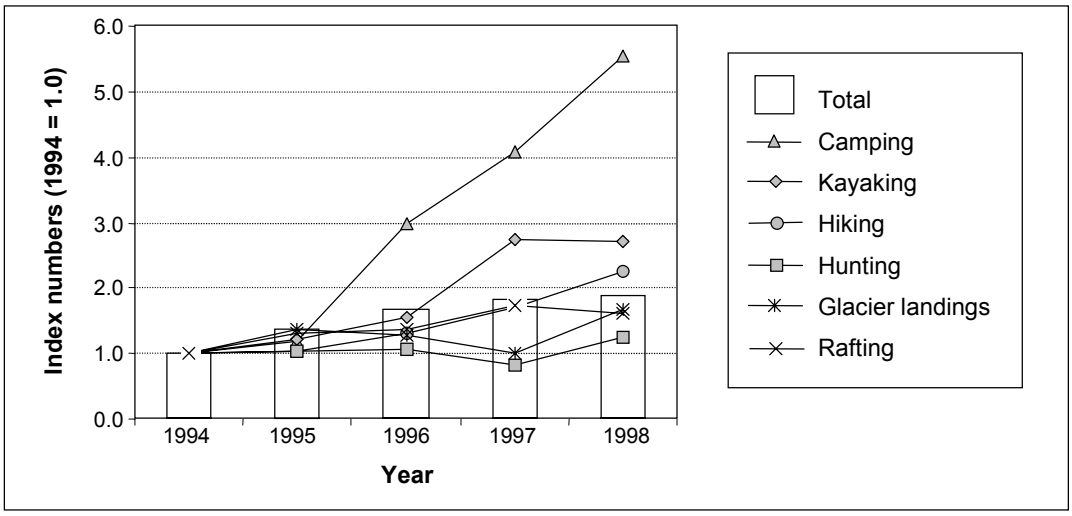

Figure 3—Trends in activities under special use permits (USDA Forest Service 1999d).

Evidence, particularly from hunting and fishing license numbers, indicates that use of the forest by nonresidents is rising faster than use by Alaska residents. These data are consistent with the perception that nonresidents are "discovering" the forest and spending some of their time on guided land tours.

It seems that facilities built and maintained by the Forest Service operate at, or near, capacity. Although there are some lulls in usage, the facilities are in excess demand during peak months.

Forest staff suggest that on some hiking trails and back-country areas, increased use is displacing users seeking a wilderness experience.

Quality of scenery is important to visitors. People surveyed in 1992 and 1995 overwhelmingly reported that they were satisfied with the quality of scenery and considered it essential for a high-quality recreation visit.

Forest Area and Capacity

As shown in table 1, the Chugach National Forest comprises more than 2.5 million hectares and has a total recreational capacity (people on the ground at one time) of more than 660,000 people—more than the current population of Alaska.

About 95 percent of the forest area is classified as primitive or semiprimitive according to the recreation opportunity spectrum (ROS) guidelines. Because of the low use densities associated with these classifications, however, only about 14 percent of the total recreational capacity is for primitive or semiprimitive activities. Only 2 percent of total capacity is classified as ROS-primitive (see table 2 and fig. 4). Thus, although the Chugach National Forest contains large amounts of total land area, certain types of recreational opportunities are currently, or are likely to become, "scarce" in an economic sense.

Total Recreation Use

Recreation on national forests is usually measured in terms of recreation visitor days. One RVD is generated by one person engaging in an activity for 12 hours—or by two people spending 6 hours each, four people spending 3 hours each, and so forth. Figure 5 shows the growth in total RVDs on the Chugach National Forest from 1989 to 1998. The total number of RVDs on the forest grew by 4.3 percent per year from 1989 through 1995. Annual growth slowed to 0.7 percent between 1997 and 1998. The pattern is similar in all ranger districts on the Chugach National Forest. Because of counting and computational changes, it is not possible to compute a defensible growth rate between 1995 and 1997.

Table 1—Land areas and recreational capacities on the Chugach National Forest

Area	ROS class[a]	Area	Capacity (PAOT)[b]
		Hectares	
Kenai Peninsula	Primitive	229 057	5,660
	Primitive II	17 402	430
	Semiprimitive nonmotorized	186 969	13,860
	Semiprimitive motorized	18 211	2,250
	Roaded natural	54 634	337,500
	Roaded modified	1 538	3,800
	Rural	2 469	18,300
	Urban	—	—
	Total	510 279	381,800
Prince William Sound	Primitive	993 525	4,910
	Primitive II	17 402	86
	Semiprimitive nonmotorized	162 687	40,200
	Semiprimitive motorized	11 331	224
	Roaded natural	688	2,550
	Roaded modified	44 516	110,000
	Rural	405	2,000
	Urban	607	15,000
	Total	1 231 161	174,970
Copper River Delta	Primitive	553 622	2,736
	Primitive II	152 975	756
	Semiprimitive nonmotorized	72 845	18,000
	Semiprimitive motorized	27 519	6,800
	Roaded natural	12 950	48,000
	Roaded modified	4 856	12,000
	Rural	1 214	6,000
	Urban	364	9,000
	Total	826 346	103,292
	Total	2 567 786	660,062

[a] ROS = recreation opportunity spectrum.

[b] PAOT = people at one time.

Source: USDA Forest Service (1998).

Table 2—Total land area and capacity by ROS class

ROS class[a]	Area (hectares)	Percentage of area	Capacity (PAOT)[b]	Percentage of capacity
Primitive	1 776 204	69	13,306	2
Primitive II	187 778	7	1,272	0
Semiprimitive nonmotorized	422 501	16	72,060	11
Semiprimitive motorized	57 062	2	9,274	1
Roaded natural	68 272	3	388,050	59
Roaded modified	50 911	2	125,800	19
Rural	4 087	0	26,300	4
Urban	971	0	24,000	4
Total	2 567 786	100	660,062	100

[a] ROS = recreation opportunity spectrum.

[b] PAOT = people at one time.

Source: USDA Forest Service (1998).

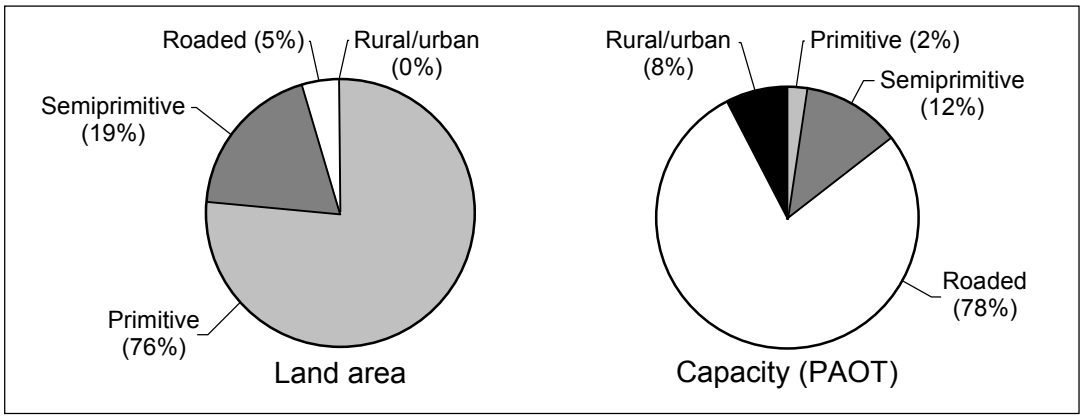

Figure 4—Distribution of Chugach National Forest area and recreational capacity by recreation opportunity spectrum classification. PAOT = people on the ground at one time.

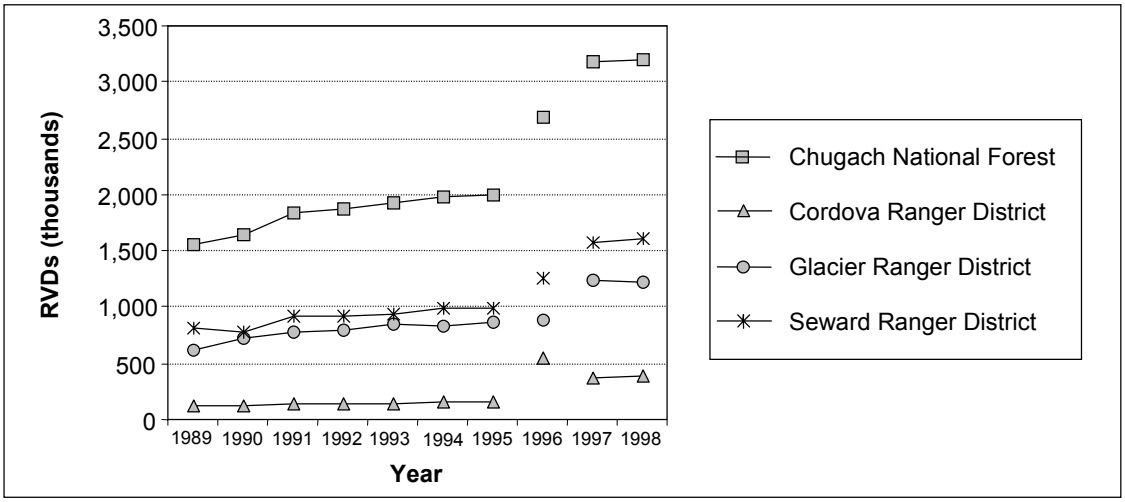

Figure 5—Total recreation visitor days (RVDs) in south-central Alaska, 1989–98.

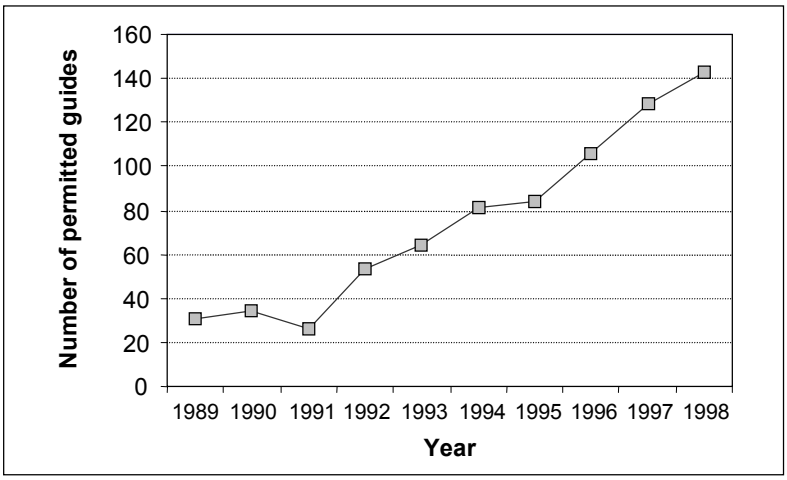

Figure 6—Number of operators under special use permit, 1989–98 (USDA Forest Service 1999d).

Commercially Mediated Recreation and Tourism Use

The special use permit data show that commercially mediated use of the forest has been rising rapidly over the past 10 years.[2] On the supply side of the market, the number of outfitter-guide permit holders has grown at an average annual rate of 18.5 percent between 1989 and 1998. Some of the growth may be due to "bandit" guides that have gotten permits. As figure 6 suggests, this growth of commercial recreation capacity will likely continue.

Our analysis of the raw permit data compiled from the ranger districts suggests that the demand for the activities offered by these outfitter-guides also has been growing, but at a slower rate. Figure 7 shows that although the number of outfitter-guide permittees jumped by 80 percent between 1994 and 1998, both the number of clients served and total revenue increased by only about 40 percent. The number of clients has risen from about 13,000 to about 19,000 during this period.

Interviews suggest that the increase in special use permit activities is related, in part, to increases in cruise ship passengers and the opening of the Kenai Princess Lodge. Some of the larger guide operations on the forest now draw much of their business from these passengers. The Kenai Princess Lodge "slows down" the flow of cruise passengers from the ship (in Seward) to the airport (in Anchorage) long enough for them to spend an evening or possibly a day engaged in activities on the forest.

Although it is risky to extrapolate from only 3 years of recent data, these numbers are consistent with the rapid growth observed in entrepreneurial activity (the number of permits) in response to perceived business opportunities. From the permits data, it is not possible to tell whether capacity growth has outstripped demand growth or whether the average size of the typical operation has simply gotten smaller as more small operators offer "boutique" recreation products. Other information, such as our interviews and the permits data for specific activities, suggests that the latter explanation is more plausible: Demand is growing, especially for the more active, adventure-based activities currently offered by small operators.

[2] Use reports from the Forest Service outfitter/guides. The permit data report the number of clients. Reporting is not always consistent. Some guides report both on- and off-forest use. Others report only on-forest use. Use may be underreported because fees paid to the forest are based on use. Not all guides submitted use reports every year. Use by clients of charter boat operators is not well represented. This category of use is covered in the Twardock database, but only for western Prince William Sound.

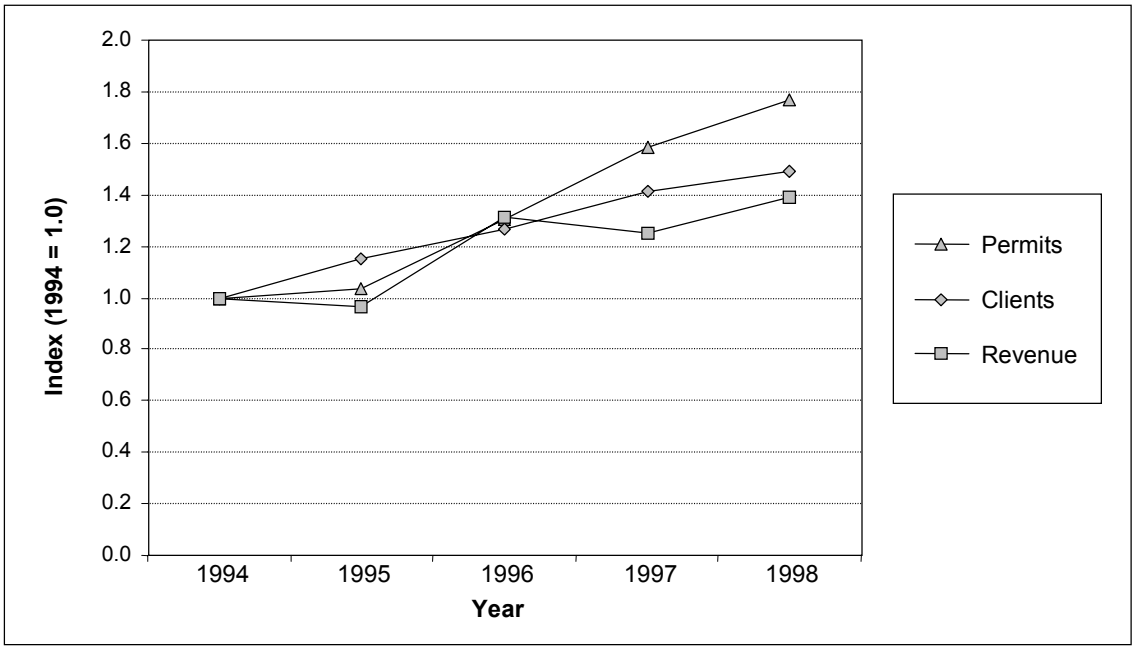

Figure 7—Outfitter-guide permits, clients, and total revenue (USDA Forest Service 1999d).

Transportation Through the Forest[3]

Figure 8 shows the trends in activities that are classified as mechanized travel on the forest. These activities are dominated by automobile and water travel. It is important to note that figures for tour boats, ships, and ferries do not include cruise ship passengers on cruise ships. These passengers do contribute to the "auto" category when they travel by bus from Seward to Anchorage.

The RIM data suggest that the number of RVDs from tour boat, cruise ship, and ferry passengers[4] is rising faster than that for automobile passengers. The interpretation of these travel data is problematic, however, because according to Chugach National Forest RIM documentation,[5] the growth of the waterborne travel category is based on changes in cruise ship passengers, but the actual amount of waterborne travel does not include such passengers. The increases in the RIM data for waterborne transportation are due to an increase in cruise ship traffic to Seward during the early 1990s. It is not clear what activities are included in this total—presumably day cruise tour boats and Alaska Marine Highway trips between Whittier, Valdez, and Cordova. The drop in automobile users in 1997 and the rise in waterborne passengers in 1996 are due to changes in computation methods.

Most automobile and bus RVDs are generated from travel on the Seward Highway, which extends for 95 miles on the forest. This is the only

[3] Updated by using traffic counts from the Alaska Department of Transportation. Train and bus touring is updated for Seward and Glacier Ranger Districts by using train passenger counts only. Cordova numbers are updated with information from a special use permit bus tour operation.

[4] Tour boat, ship, and ferry information are updated for Glacier and Cordova Ranger Districts by using cruise ship passenger information. No data are provided for Seward. Because cruise ship passengers disembarking in Seward are not on the Chugach National Forest when they disembark, they are not used in annual calculations of water transportation. They are counted instead in the "viewing scenery, wildlife, and fish" activity category based on their travel through Prince William Sound.

[5] Notes labeled "Methods we used in 1997 for tracking and reporting RVDs on the Chugach National Forest for FY97," provided by Chugach National Forest recreation staff. On file with authors: University of Alaska, Institute of Social and Economic Research, 3211 Providence Dr., Anchorage, AK 99508.

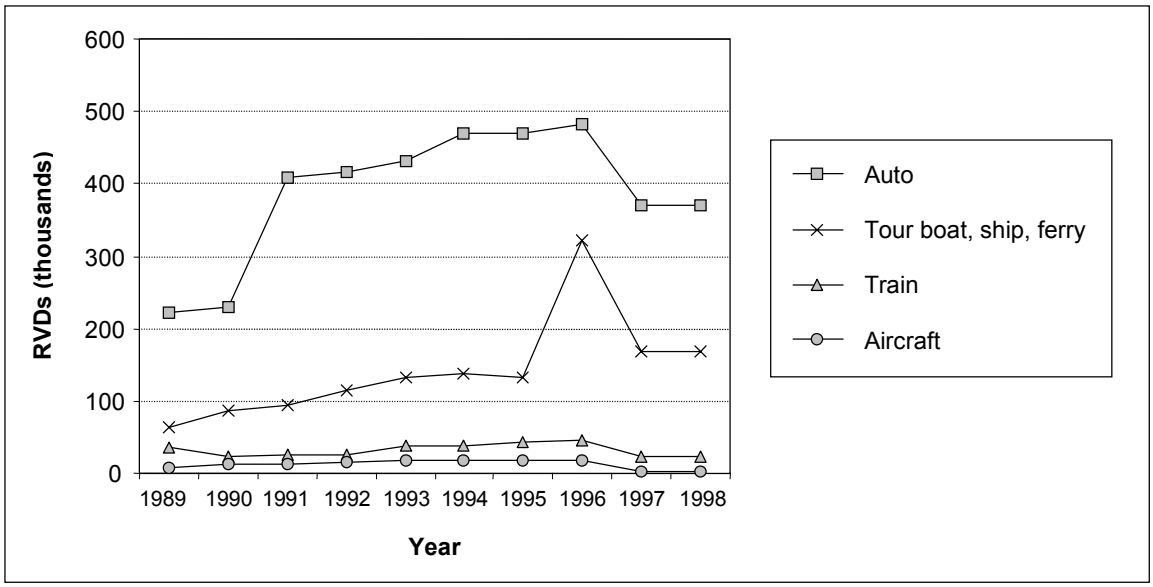

Figure 8—Transportation recreation visitor days (RVDs) through the forest (USDA Forest Service 1999b).

state highway on the forest. Although the functional capacity of this highway has been increased in recent years through lane additions and straightening, the amount of available state highway mileage has not changed. Thus, people are likely experiencing more traffic today than they were 10 years ago (table 3).

Activities

We discuss the remaining activities by grouping them into four broad categories: viewing scenery, wildlife, and fish; land-based, facilities-based activities, where people spend time "on the ground" and use facilities such as campgrounds; land-based, dispersed activities; and water-based activities.

Viewing scenery, wildlife, and fish—In 1998, more than half of the time people spent on the Chugach National Forest was used viewing scenery, wildlife, and fish (fig. 9). Nearly all people who engaged in this activity did so from cruise ships, tour boats, or automobiles.[6] Figure 10 shows that participation in this activity rose at an annual rate of about 9.0 percent between 1989 and 1995—about twice the rate for overall RVDs during this period. The RIM data indicate a further large jump between 1995 and 1996. This is because viewing by passengers on cruise ships began to be included in RIM data in 1996.

Viewing scenery was also the dominant activity in all ranger districts (figs. 11 through 13). This is particularly true in the Glacier and Cordova Ranger Districts, which lack significant road-accessible campground facilities near the large population center of Anchorage.

Land-based, facilities-based activities—Facilities-based activities involve the use of facilities and infrastructure provided and maintained by the Forest Service or concessionaires, such as campgrounds,[7] cabins, trails, visitor centers, interpretative sites, and boat launches. Dispersed activities are those that do not rely directly on infrastructure—fishing, hunting, and gathering forest products. Hiking is classified as a facilities-based activity because it depends on trail infrastructure.

[6] We estimated the 1998 shares of viewing from autos and cruise ships based on the 1995 shares calculated from survey data.

[7] Not all camping activity is in Forest Service campgrounds, but the campground share is much larger than the dispersed share, and the most reliable data are for campgrounds.

Table 3—Existing roads on the Chugach National Forest

Road type	Kenai Peninsula	Prince William Sound	Copper River Drainage	Total Forest
		Miles		
State highway	95	0	0	95
Forest highway	32	0	27	59
Development road, maintenance level 1	3	0	0	3
Development road, maintenance level 2	13	0	12	25
Development road, maintenance levels 3–5	53	0	13	66
Nonsystem Forest Service road	0	34	0	34
Total	196	34	52	282

Source: USDA Forest Service (1998).

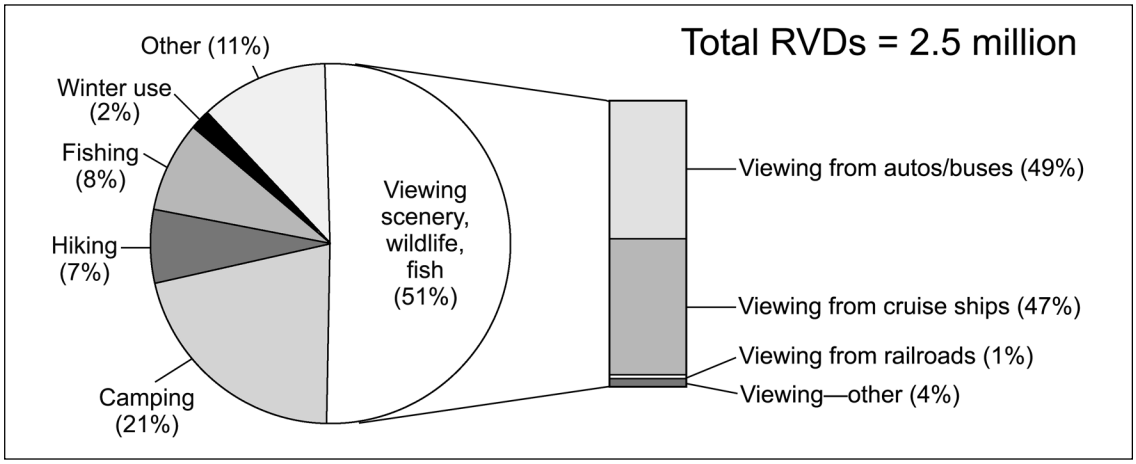

Figure 9—1998 forest activities, other than travel (USDA Forest Service 1995a, 1998). RVD = recreation visitor day.

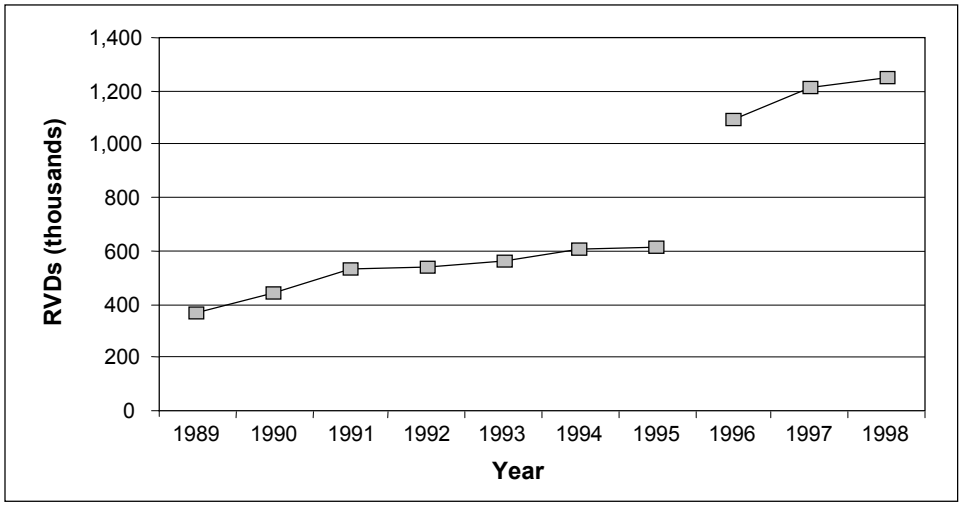

Figure 10—Recreation visitor days (RVDs) viewing scenery, wildlife, and fish (USDA Forest Service 1999b).

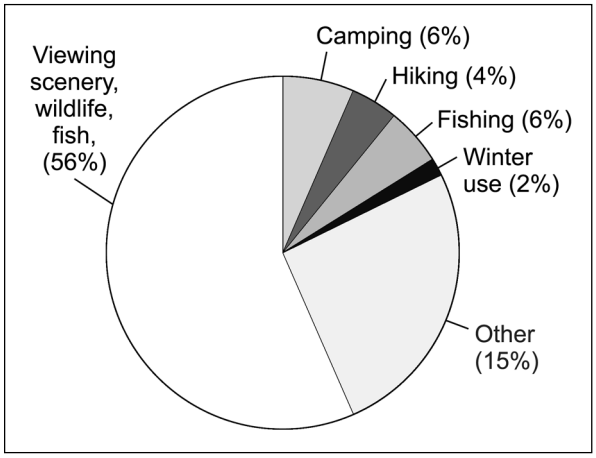

Figure 11—Activities in the Cordova Ranger District (USDA Forest Service 1999b).

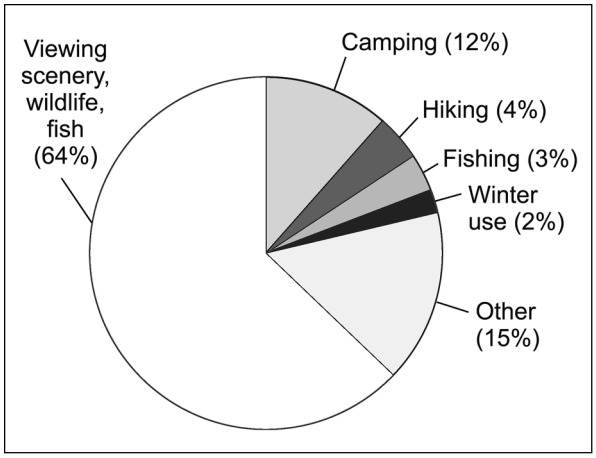

Figure 12—Activities in the Glacier Ranger District (USDA Forest Service 1999b).

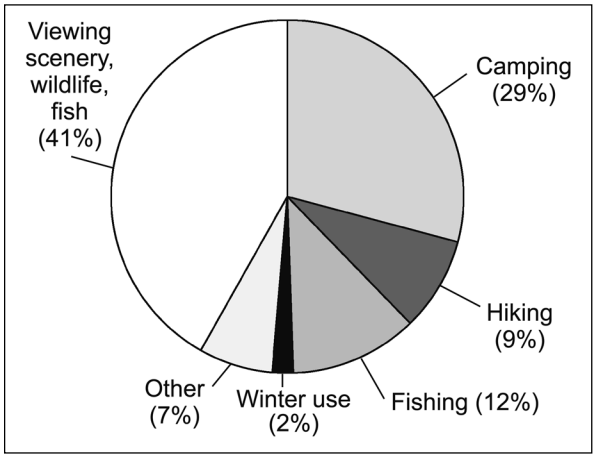

Figure 13—Activities in the Seward Ranger District (USDA Forest Service 1999b).

Facilities-based activities have remained relatively flat over the past 10 years (fig. 14). The steady levels of use shown in the RIM data suggest that facilities are operating at or near their capacity at peak times. This conclusion is consistent with anecdotal evidence from specific campgrounds[8] and with our interviews with campground hosts conducted during summer 1999.

Camping—Table 4 shows that the number of campgrounds has remained constant over the past 4 years. Figure 15, on the other hand, indicates a slight increase in demand between 1989 and 1996. Because of the change in RVD computation methods in 1997, only the data through 1996 are comparable.

Table 4—Chugach National Forest campgrounds

Ranger district	1995	1996	1997	1998
Glacier	4	4	4	4
Cordova	—	—	1	1
Seward	11	10	10	9
Total forest	15	14	15	14

Source: USDA Forest Service (1998).

Measured day use of campgrounds has apparently declined, whereas overnight camping increased during the early 1990s and then stabilized. These shifts in types of camping could be due to changes in reporting procedures, so it is best to focus on the camping activity totals.

Figures 16 through 18 show that most camping occurs in the Seward Ranger District, where most facilities are located. Without further analysis of the effect of the 1997 change in algorithms, it is difficult to say whether actual activity in the Seward and Glacier Ranger Districts has increased since 1993.

In table 5, we combine occupancy data from concessionaire reports with capacity data from the Forest Service. The data show that campgrounds

[8] As recalled by Chugach National Forest recreation staff.

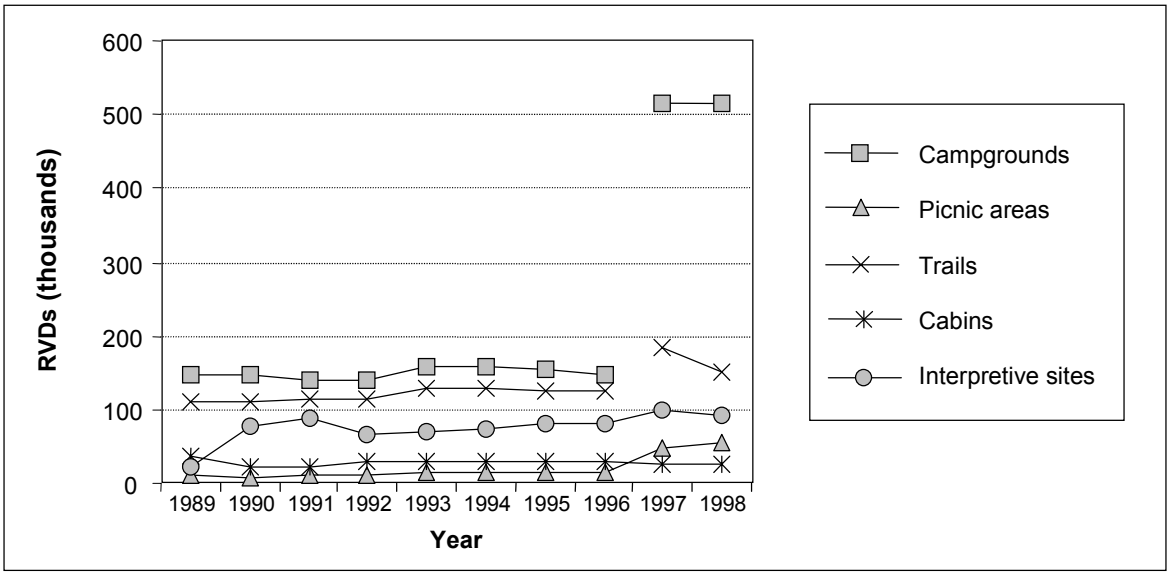

Figure 14—Facilities use for the entire forest (USDA Forest Service 1999b). Note: The sharp increase in campground recreation visitor days (RVDs) in 1997 is due to a change in computational methods.

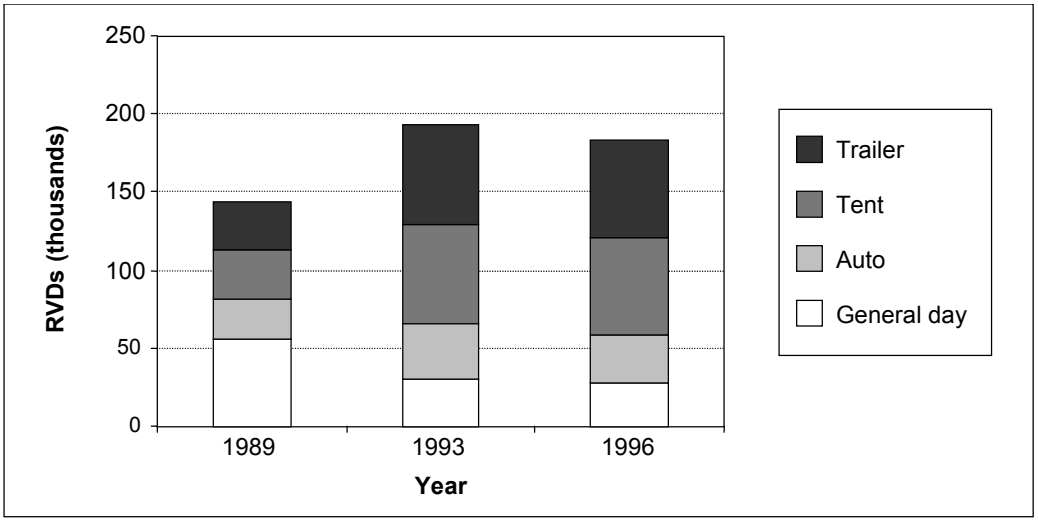

Figure 15—Changes in camping recreation visitor days (RVDs) on the Chugach National Forest (USDA Forest Service 1999b).

are operating at capacity[9], and the campgrounds used the most are in the Glacier Ranger District. In this ranger district, there are four campgrounds accessible directly off the Seward Highway or in Portage Valley. Easy access and proximity to Anchorage account for the higher rates of use.

The 1998 report done by the concessionaire for Russian River campground shows the campground full and campers in overflow areas. Information from Forest Service staff, however, suggests that there may have been a possible change in use patterns at the Russian River campground. Staff in the Anchorage office feel that occupancy has been fish-dependent, with little or no demand when there is no fishing.

[9] For planning purposes, the Forest Service considers 60 percent to be capacity.

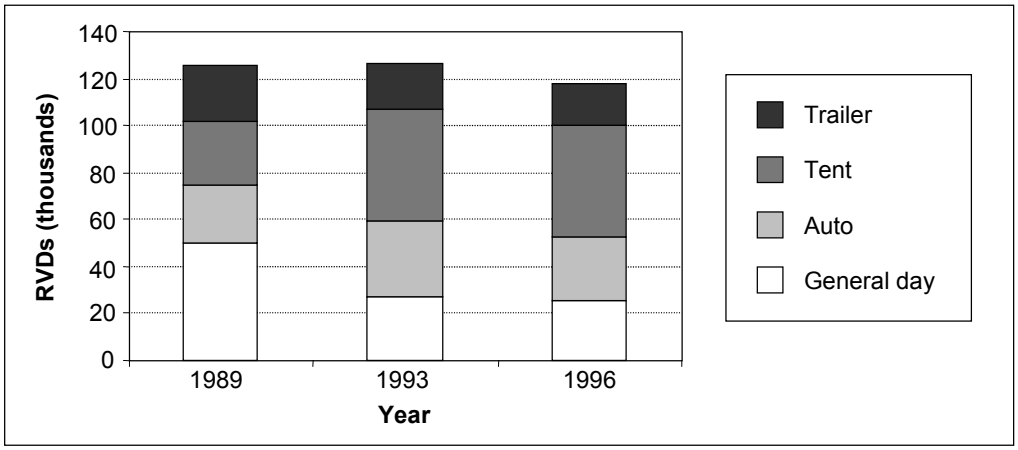

Figure 16—Camping in the Seward Ranger District (USDA Forest Service 1999b). RVD = recreation visitor day.

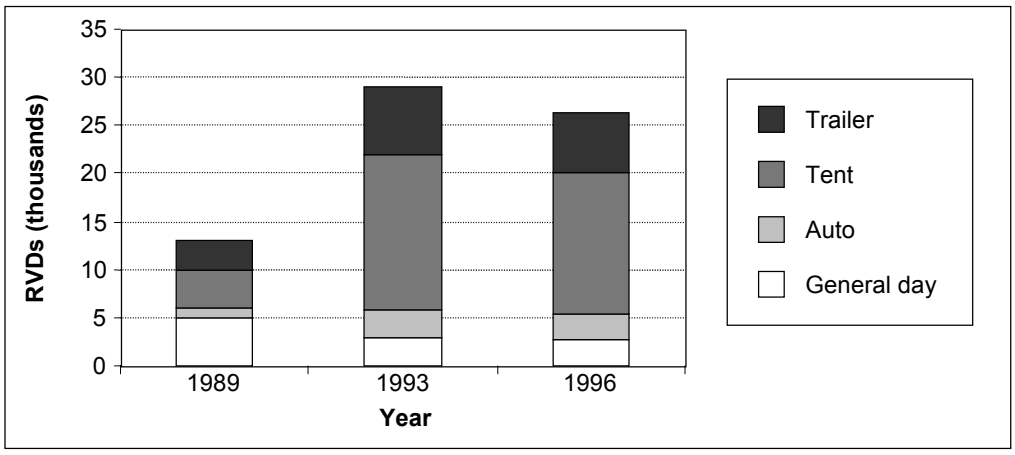

Figure 17—Camping in the Glacier Ranger District (USDA Forest Service 1999b). RVD = recreation visitor day.

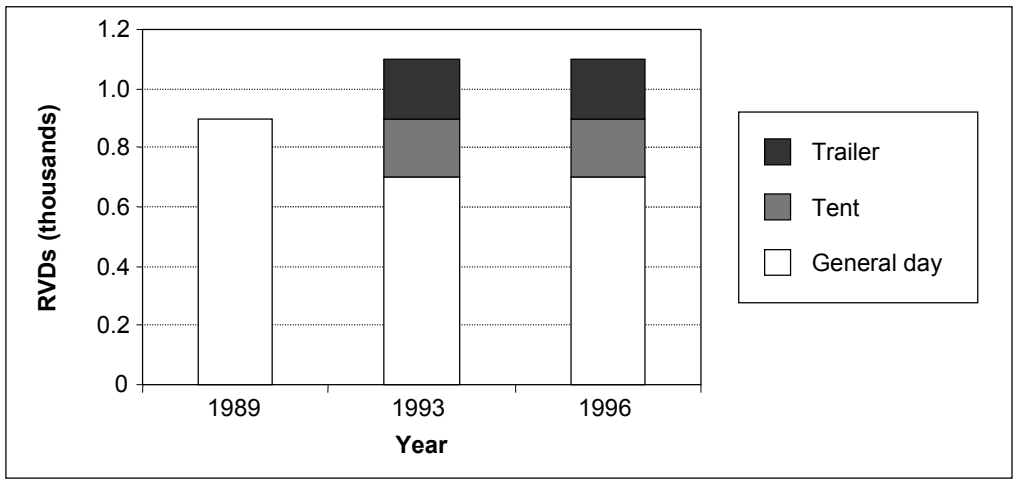

Figure 18—Camping in the Cordova Ranger District (USDA Forest Service 1999b). RVD = recreation visitor day.

Table 5—Campground capacities and occupancy, 1995–98

Ranger district	1995	1996	1997	1998
Campground capacity (PAOT):[a]				
Glacier	420	420	420	420
Cordova	—	—	—	—
Seward	1,815	1,705	1,705	1,530
Total forest	2,235	2,125	2,125	1,950
Camper days:				
Glacier	36,631	35,832	36,128	33,053
Cordova	—	—	—	—
Seward	117,689	111,509	110,825	99,812
Total forest	154,320	147,341	146,953	132,865
Average occupancy rate:				
			Percent	
Glacier	87	85	86	79
Cordova	—	—	—	—
Seward	65	65	65	65
Total forest	69	69	69	68

[a] PAOT = people at one time.

Source: USDA Forest Service (1998).

Note: Average occupancy calculations assume a 100-day season and 24-hour stay per camper day.

Others in the Seward Ranger District say they are now seeing an increase in demand from people who are not interested in fishing and go to the campground when fishing is closed to use the trail or view fish.

Forest Service staff in the Seward Ranger District said that campgrounds operate at capacity on the weekends. In 1998, campgrounds operating at the highest capacity in this district were Primrose and Ptarmigan. Both are overnight sites for people visiting Seward. In the Glacier Ranger District, in 1998, Granite Creek and Williwaw were the fullest. No comparable site-specific data were available for the Cordova Ranger District. The RIM data show that in the Cordova Ranger District, dispersed tent camping is the largest share of overnight camping.

Commercial or guided camping—From 1994 through 1998, there has been a large increase in camping with guides operating under special use permits. According to the permit use statements, in the Seward Ranger District, guided camping has increased from zero to 323 people. Nearly all the guided camping occurs in the Russian River area. In the Glacier Ranger District, the number of people who participated in guided camping rose from 158 people in 1994 to 683 in 1998.[10] Nearly all camping in this district is associated with sea kayaking. Camping activity is concentrated in "outfitter/guide camping sites" in western Prince William Sound. According to Chugach National Forest staff, campground use in areas near Anchorage is tied to weather and the opening and closing of fisheries.

[10] In the Glacier Ranger District, use reports do not list clients by specific activity. We estimated the number of campers based on permitted activities and average length of stay.

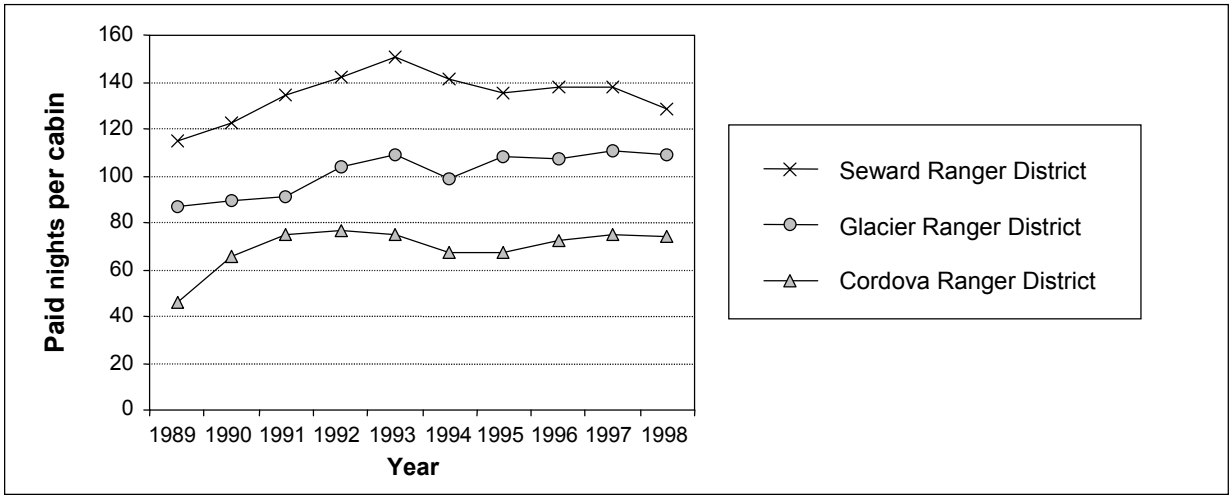

Figure 19—Cabin occupancy (USDA Forest Service 1999c).

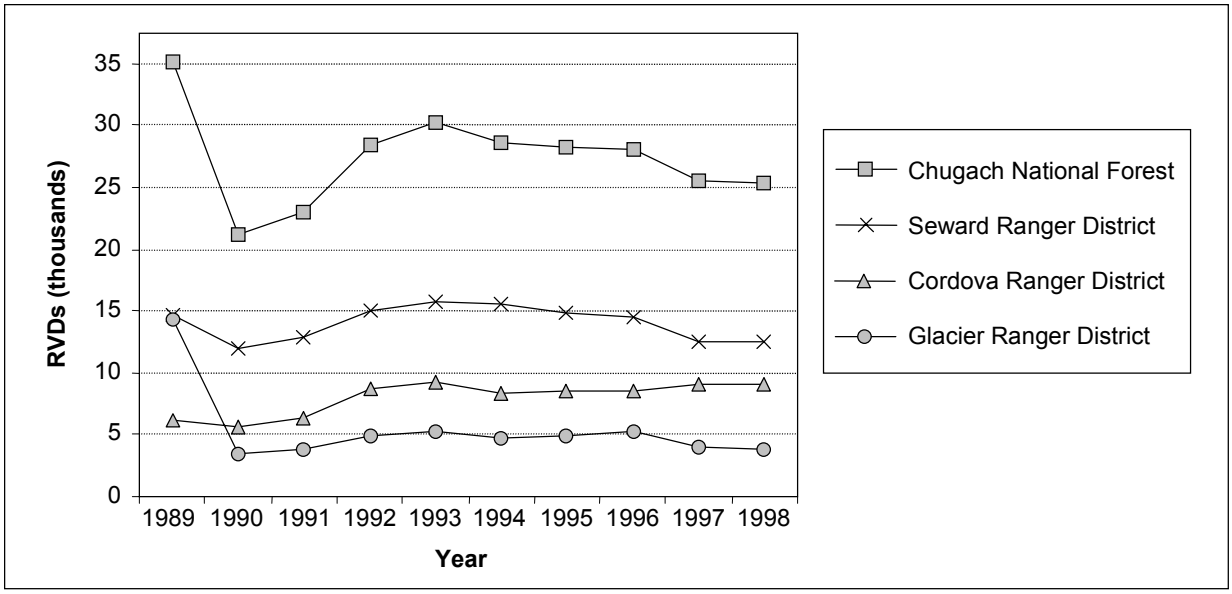

Figure 20—Cabin use (USDA Forest Service 1999b). RVD = recreation visitor day.

Cabins[11]—Figures 19 and 20 suggest that cabins are operating near capacity. Officials in the Seward Ranger District confirmed this, saying that cabin use cannot increase much more. They think cabin occupancy rates in the Seward Ranger District are higher than in other districts because most cabins in the Seward Ranger District are accessible from roads and trails, whereas the others require use of a boat or plane. There are 7 cabins in the Cordova Ranger District and 18 in each of the other ranger districts. The drop in RVDs (fig. 20) after 1996 is mostly because of cabin closures.

The 1992 and 1995 recreation surveys measured cabin use by residents and nonresidents. The results are consistent with growing use by

[11] The cabin registration system and campground concessionaires report the number of nights occupied. Cabin reservations also show the number in each party. This information is used for annual updates.

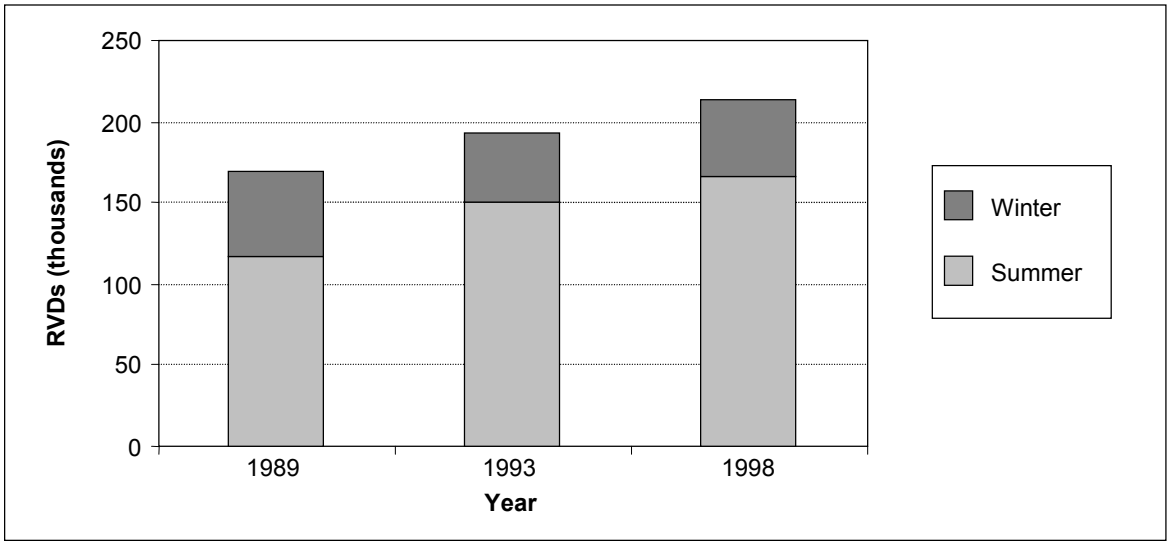

Figure 21—Trail use (USDA Forest Service 1999b). RVD = recreation visitor day.

nonresidents. In 1992, 64 percent of cabin users surveyed were Alaska residents. In 1995, 61 percent of the users were residents.[12]

Trails—We divided trail use into summer and winter activities (fig. 21). Summer use consists of hiking, guided and unguided walking, horseback riding, and bicycling. Winter use includes cross-country skiing and snowshoeing, and ice and snowcraft travel. Recreation visitor days for trailhead and snowpark activities were divided between summer and winter uses based on the winter and summer shares of total RVDs. Although summer trail use grew by 40 percent between 1989 and 1998, measured winter use remained constant or declined.

Winter trail use: snow machines and skiing—Data on winter use are not formally collected as part of the RIM process. The data presented in this section are therefore based on the 1992 customer survey. We present winter trail use estimates for completeness but suggest that they be used with caution when trying to draw inferences.[13]

According to RIM estimates presented in figure 22, ice and snow machine[14] and cross-country skiing and snowshoeing make up nearly equal shares of winter trail-based activity. The RIM estimates also show snow machine use decreasing and dipping below cross-country skiing, but this decrease is not supported by the perceptions reported by ranger district staff. Forest Service staff in both the Glacier and Seward Ranger Districts reported that snow machine use has risen rapidly. They also said snow machines are displacing skiers.

Data collected from March through early May 1999 as part of an environmental assessment (USDA Forest Service 1999a) show that at selected parking lots along the Seward Highway where vehicles were counted, vehicles pulling snow machines outnumbered those carrying skiers (table 6).

Survey data from the 1997 to 2002 Alaska statewide comprehensive outdoor recreation plan (Alaska Department of Natural Resources 1999) show that participation rates by Alaskans for snow machining increased from 26 to 36.4 percent between 1992 and 1997, whereas participation in cross-country and trail skiing fell from

[12] A chi-square test showed that these differences are not statistically significant.

[13] For activities where no new data are provided, the Chugach National Forest uses the count from the prior year.

[14] Note that not all snow machines use trails.

Table 6—Winter parking lot vehicle counts

Site	Chugach National Forest vehicle count		Consultant vehicle count	
	Snowmobile	X-C skier	Snowmobile	X-C skier
Twentymile	10	1	23	1
Placer River	13	1	16	1
Turnagain Pass	19	12	23	10

Note: X-C = cross country.

Source: Chugach National Forest (1999).

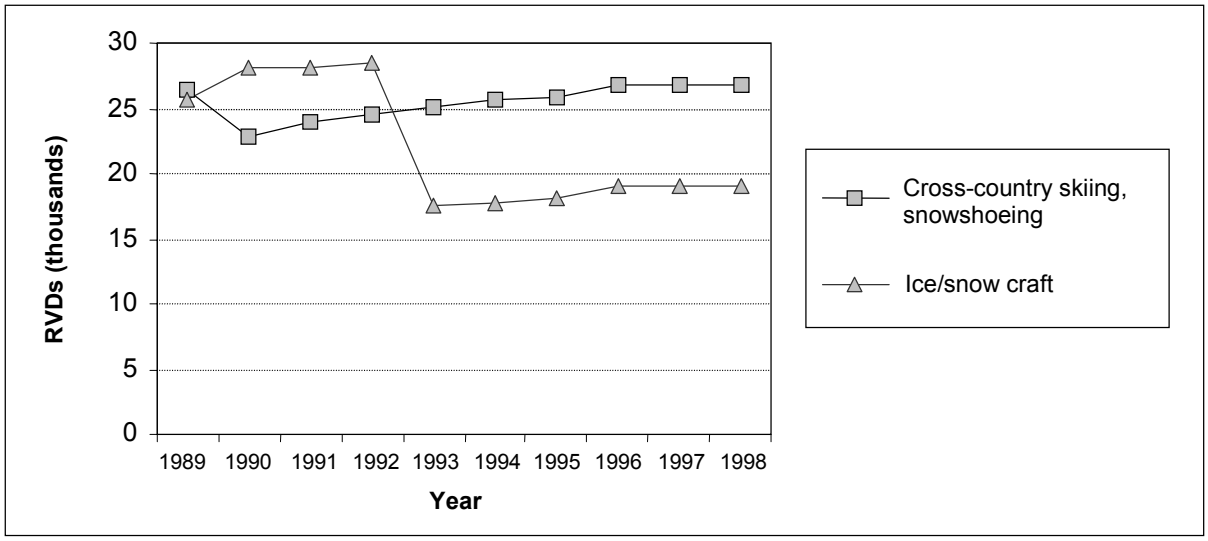

Figure 22—Estimated winter trail use (USDA Forest Service 1999b). RVD = recreation visitor day.

34 to 27.4 percent.[15] The surge in snow machine usage is also supported by vehicle registration data (Alaska Department of Public Safety 1989–98). These data show that the number of snow machines registered to Anchorage residents doubled between 1992 and 1997,[16] whereas the Anchorage population increased by only 4 percent. Officials in the Seward Ranger District report that parking is a constraint on snow machine activities. Parking lots were not built to accommodate trucks pulling trailers.

Permit data show a small number of special use permit snow machine tours—around 20 people per year—with no clear growth trend evident. Special use permit back-country skiers total less than 20 per year (this does not count the 1,100 per year associated with the Anchorage Nordic Ski Club's ski train special event permit).[17]

Summer trail use: hiking, biking, and horseback riding—There are 734 kilometers of trails on the Chugach National Forest. Sixty percent of the trails are in the Seward Ranger District,

[15] These data are for statewide participation and do not translate directly into use of the Chugach National Forest. We use them to show a time trend.

[16] Some of this increase is probably due to an increase in the share of the snowmachine fleet that is actually registered. Registration is required by law, but the law is not strictly enforced.

[17] We collected special event permit data for the Glacier Ranger District only.

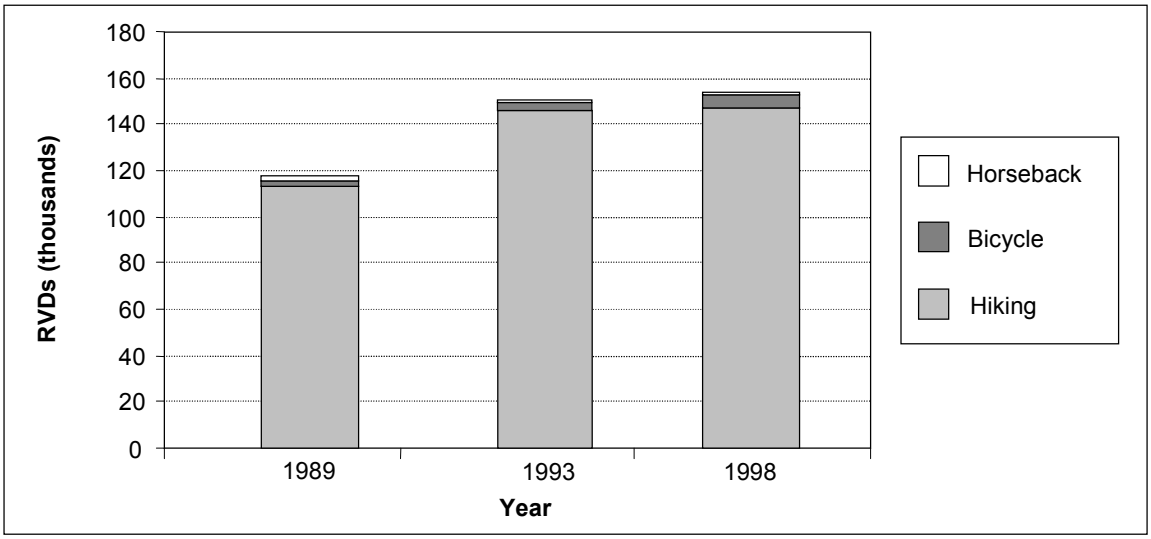

Figure 23—Summer trail use (USDA Forest Service 1999b). RVD = recreation visitor day.

26 percent in the Cordova Ranger District, and 13 percent in the Glacier Ranger District. Figure 23 shows that hiking[18] accounts for about 95 percent of all summer trail activities in the forest. The pattern is the same in all ranger districts.[19]

After rising 30 percent between 1989 and 1993, the level of hiking RVDs has remained essentially constant throughout the forest. Most hiking is done on the trails in the Seward Ranger District (fig. 24). Hiking activities increased fastest in the Glacier Ranger District, more than doubling between 1989 and 1993. They increased by about 20 percent in the other two districts during this period.

Permit data presented in figure 25 show that the number of people going on special use permit hikes has grown extremely rapidly during the 1994–98 period, albeit from a small base. During this period, special use permit hiking has doubled in the Glacier Ranger District and quadrupled in the Seward Ranger District.

Most of the special use permit hiking in the Seward Ranger District is on the Russian River and Ptarmigan Creek trails. Glacier Ranger District use reports do not specify areas for hikers, but the popular Crow Pass trailhead and Winner Gorge trails are likely the sources of much of this activity. Officials in the Seward Ranger District report that some trails are at capacity for their classification. They noted the Resurrection Pass trail—classified as semiprimitive, nonmotorized[20]—exceeds capacity for this classification on summer weekends. There are conflicts among users (bikers, hikers, and horseback riders) on this trail.

Biking is the fastest growing summer trail activity; it grew by almost 9 percent per year from 1989 to 1996.[21] Biking is increasing fastest in the Seward Ranger District, where it has risen by 10 percent per year from 1989 to 1996, according to RIM data.

Other data sources provide evidence of rapidly increasing use of trails by bicyclists. First, ranger district staff report increasing numbers

[18] Hiking and unguided and guided walking are grouped as hiking. Trailhead activities are not included here.

[19] The Seward Ranger District keeps trail registers and does periodic head counts at trailheads. The Cordova Ranger District uses traffic counts to update trail use. Data are not collected on trail use in the Glacier Ranger District. The Glacier Ranger District hiking use numbers are increased according to the increases in the other two districts.

[20] Areas of the forest are classified according to the ROS. Classifications range from primitive to urban.

[21] We calculated growth in biking from 1989 to 1996 because the Forest Service reporting methods changed in 1997.

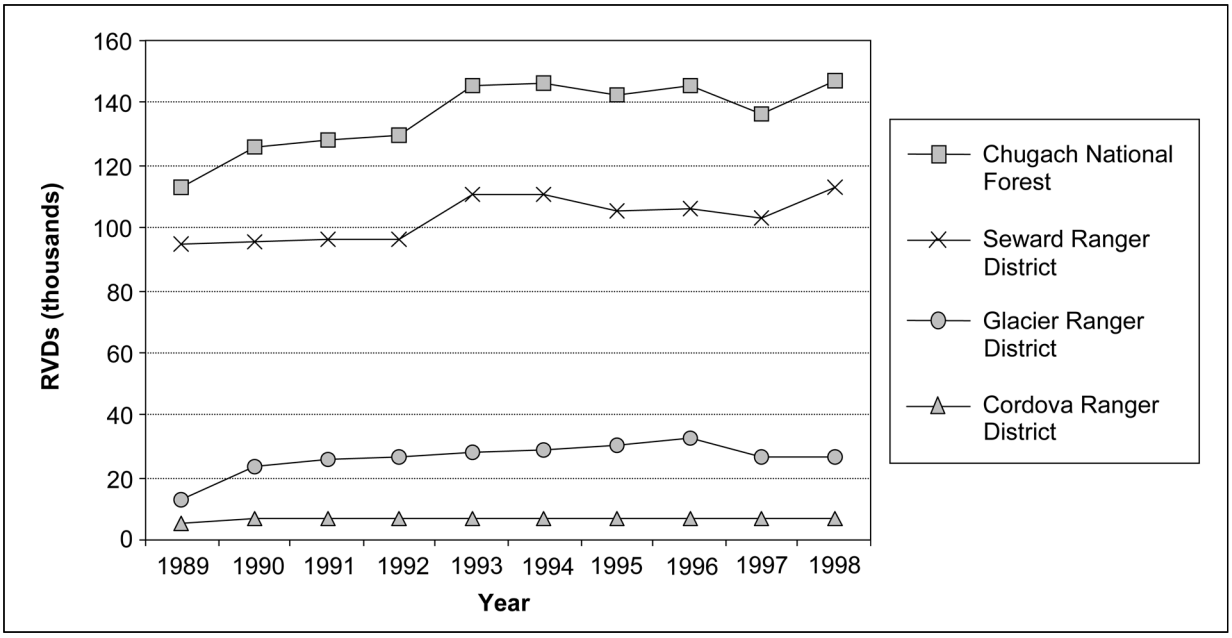

Figure 24—Hiking activity by district (USDA Forest Service 1999c). RVD = recreation visitor day.

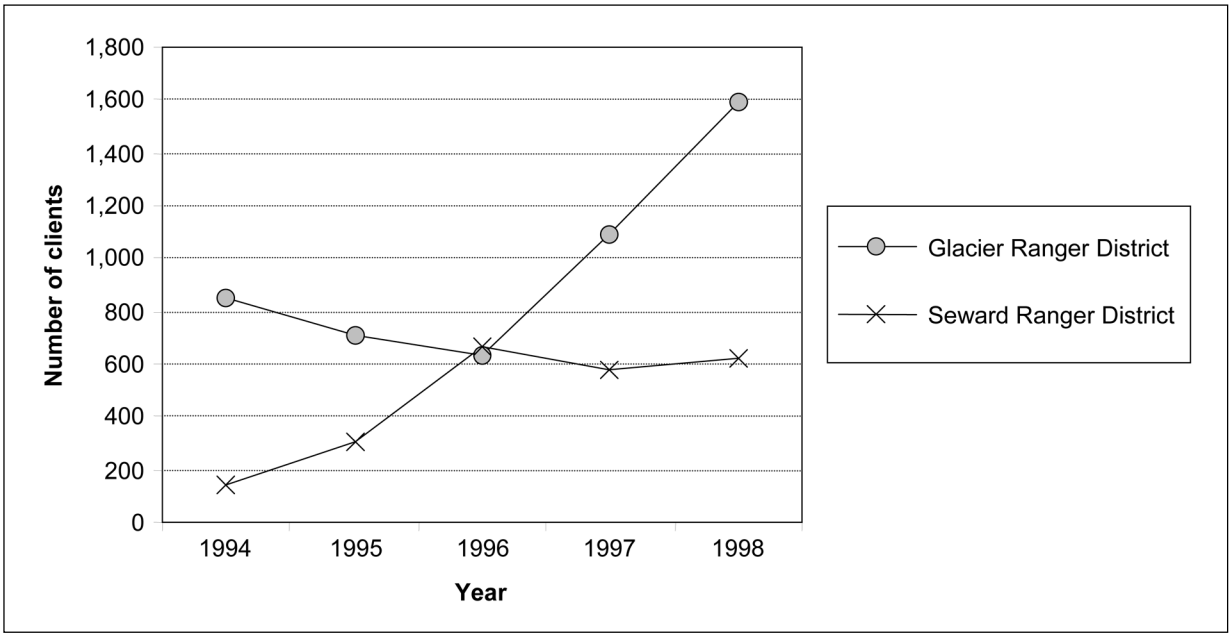

Figure 25—Hiking under special use permits (USDA Forest Service 1999d).

of bicyclists.[22] Reports from selected trailheads in the Seward Ranger District show a rise from 393 bicyclists in 1996 to 1,226 in 1997. According to these reports, the areas most frequented by bicyclists are Resurrection Pass, Johnson Pass, Crescent Lake Trail, and Upper Russian Lake Trail. Second, the permit data show a dramatic rise in the number of guided bike trips. All the bicycling trips reported in the permit data were in the Seward Ranger District. The number of people biking with commercial permittees rose from zero in 1994 to 97 in 1997, and 113 in 1998.

The RIM data show no change in the level of use by individual (nonguided) horseback riders, but this could be because of scant data. Permit data does show a rise in trail use by commercially supported horseback riders. All the special use permit activity is in the Seward Ranger District. Use is reported on the Old Sterling Highway, Johnson Pass, Resurrection Pass, Carter and Crescent Lakes, and Devil's Pass. The number of reported clients increased from 74 to 348 over the 5 years from 1994 to 1998. According to forest staff, there have been clashes between hikers and hunters and horseback riders on the Resurrection Pass trail because the horses churn up the trail.

If the number of hikers had risen faster than trail mileage, there could be increased crowding in some areas. This does not appear to be the case. Figure 26 combines summer trail use RVDs with trail mileage in each district and shows that RVDs per mile are nearly constant. Thus, it seems that trail usage rates have not changed much over the past 10 years. Trail use in the Glacier and Seward Ranger Districts is similar. Because of their remoteness from population centers, trails in Cordova have a lower level of use per mile of installed capacity.

Boat launches—Boat launches are not a significant source of RVDs. They totaled 1,000 in 1997 and dropped to 300 in 1998. Data on boat launches are scant. Numbers are only provided for 1997 and 1998.

Interpretative sites and visitor centers—The RIM/Infra data on visitor centers, interpretative exhibits, and signs show that RVDs have risen steadily over the past 10 years (fig. 27).[23] Most of these RVDs are generated at the Begich Boggs Visitor Center at Portage Glacier. Forest staff report that the automatic counters at this site had problems that were only recently rectified. This change in counting methods may explain the reported decline in Glacier Ranger District RVDs for this activity. In addition, Portage Glacier is no longer directly visible from the visitor center.

Other facilities—The RIM system does not maintain data on parking lot and restroom facilities. According to Seward Ranger District staff, snow machine use presents a parking problem in some areas including Lost Lake and Resurrection Pass. Parking lots overflow, and trucks hauling trailers are filling up parking areas and spilling over into residential and other areas. The shortage of restroom facilities along the highway has created a sanitation problem for the Forest Service.

Dispersed land-based activities—

Hunting—Figure 28 shows reported hunting RVDs. Because the Cordova Ranger District supports more hunting than either the Seward or Glacier Ranger Districts (at least since 1993) and has low levels of other activities, hunting composes a much larger share of the total RVDs in this ranger district. Our compilation of special use permit hunting (fig. 29) shows that in the Seward and Glacier Ranger Districts, the number of clients for special use permit hunting has dropped steadily since 1994. In contrast, guided hunting in the Cordova Ranger District has risen sharply over the past 5 years. Overall, hunting on the forest with special use permit guides has increased by about 20 percent during this time.[24]

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[22] A survey in the Seward Ranger District in 1992 and 1993 counting users at trailheads noted that no bicyclists signed the trail register. Bicycle shares are estimated based on head counts at trailheads.

[23] Visitor center data are updated with visitor counts.

[24] Hunting and fishing data are updated annually based on hunting and fishing licenses sold by the Alaska Department of Fish and Game.

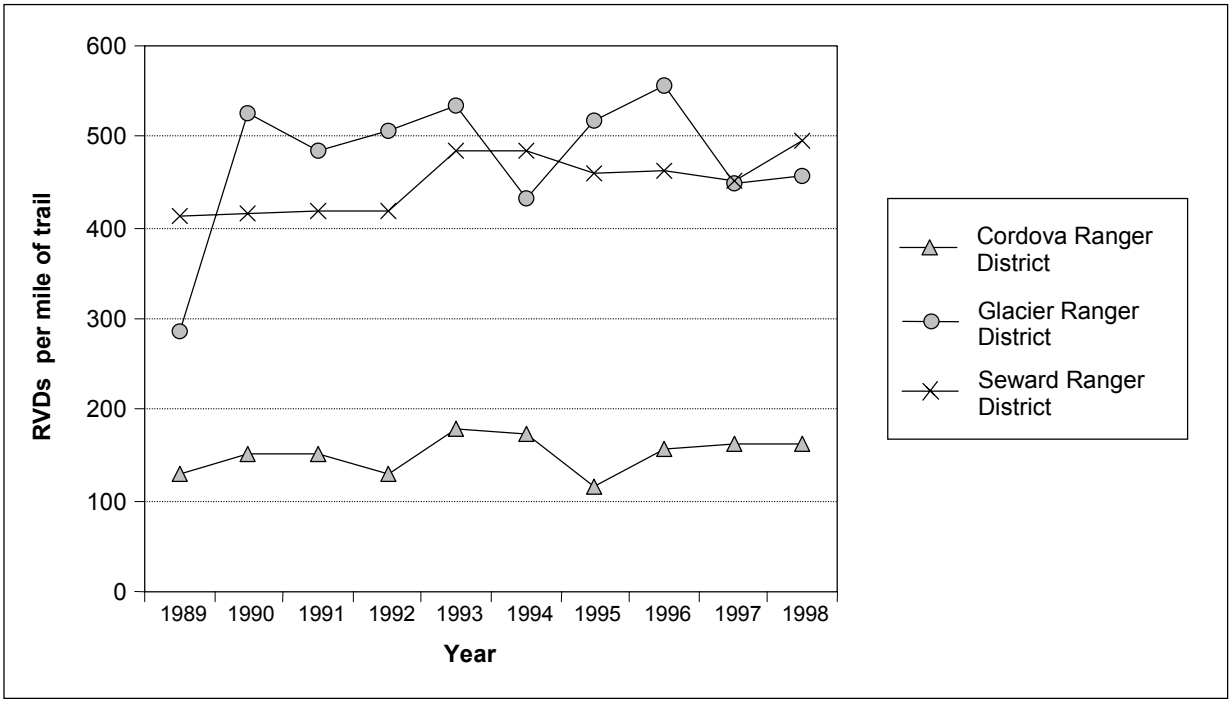

Figure 26—Capacity utilization rates for trails. RVD = recreation visitor day.

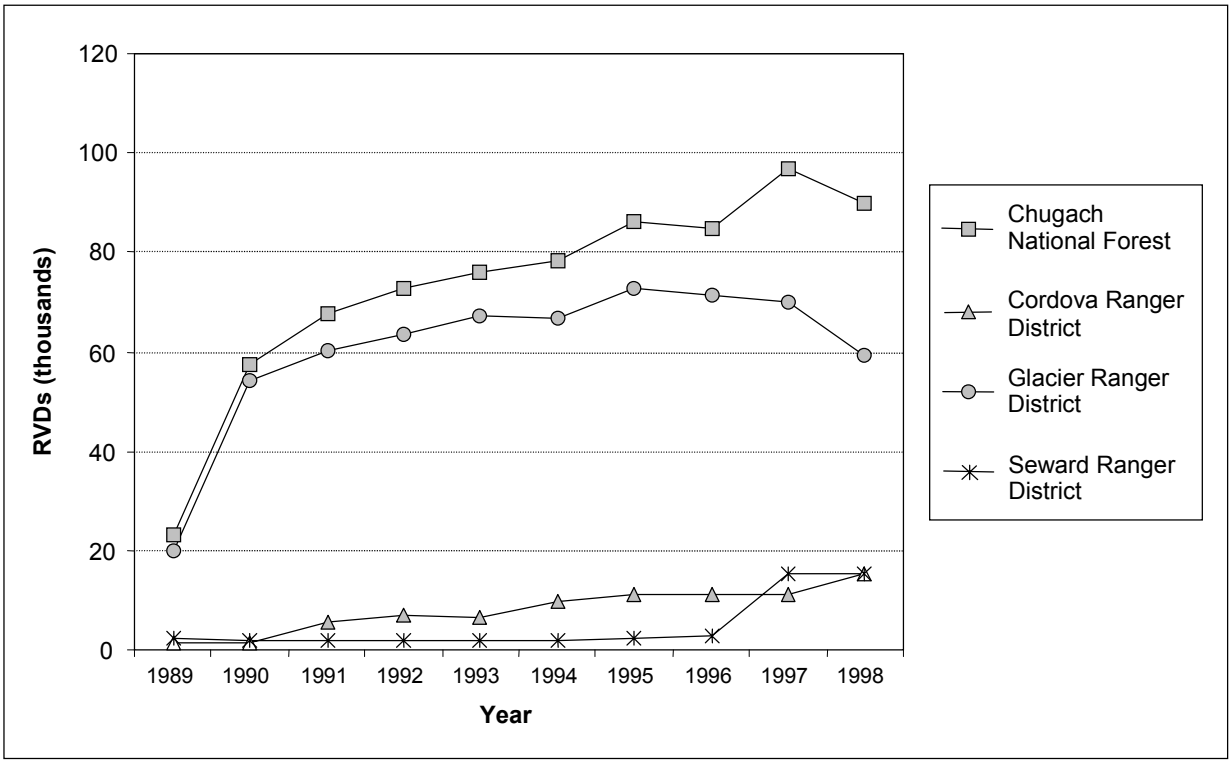

Figure 27—Use of visitor centers, exhibits, and signs (USDA Forest Service 1999b). RVD = recreation visitor day.

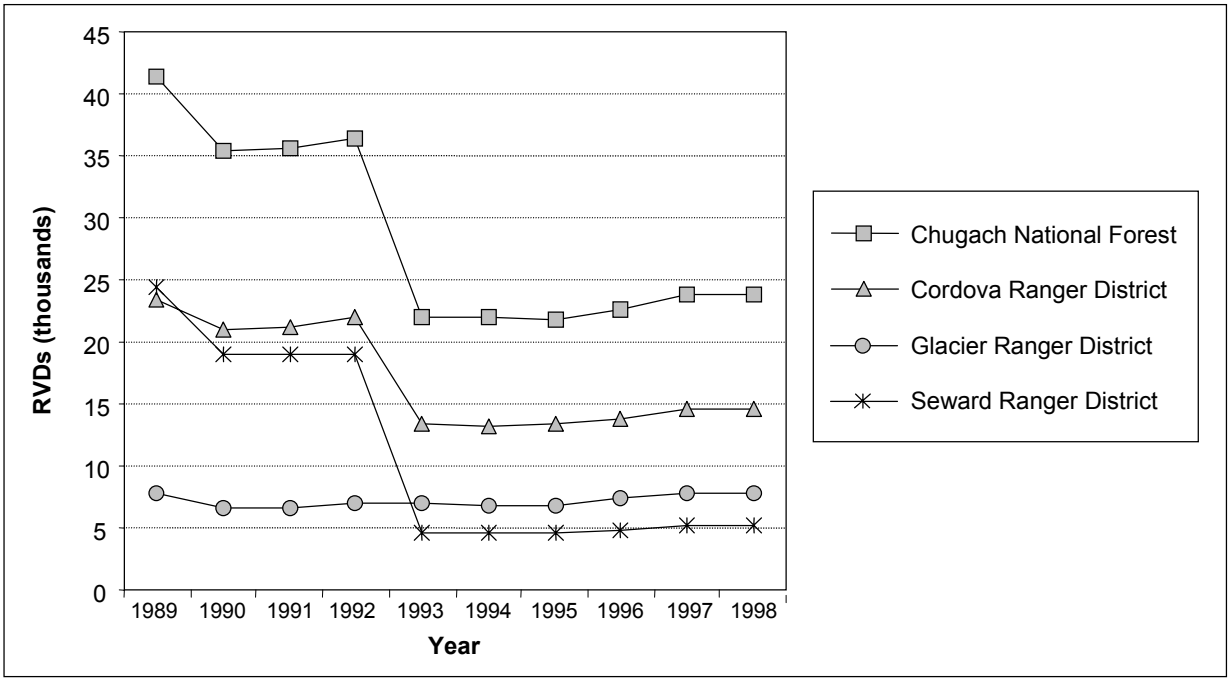

Figure 28—Hunting activity. RVD = recreation visitor day.

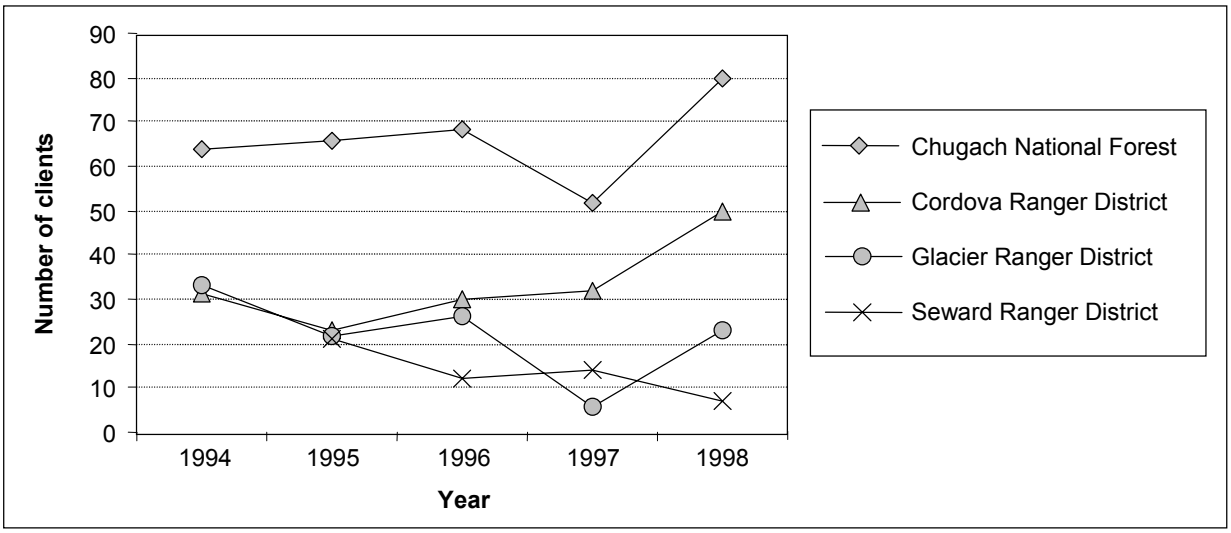

Figure 29—Hunting clients served under special use permits (USDA Forest Service 1999d).

Little is known about the demographic makeup of these hunters, but statewide data on hunting license sales from Alaska Department of Fish and Game show that the number of Alaska resident hunting licenses has declined during the past decade, whereas the number of nonresident licenses has risen from 10,000 in 1989 to nearly 14,000 in 1998. The nonresident share of all licenses increased from 12 to 17 percent during this period.

Figure 30 shows the number of animals killed by recreational hunters on the forest from 1994 to 1998.[25] The data show low numbers of caribou and sheep taken and little change over the 5 years. The numbers of moose and goats killed have dropped by half during the period.

[25] Bears killed were also part of the data set, but the number of reported kills was zero.

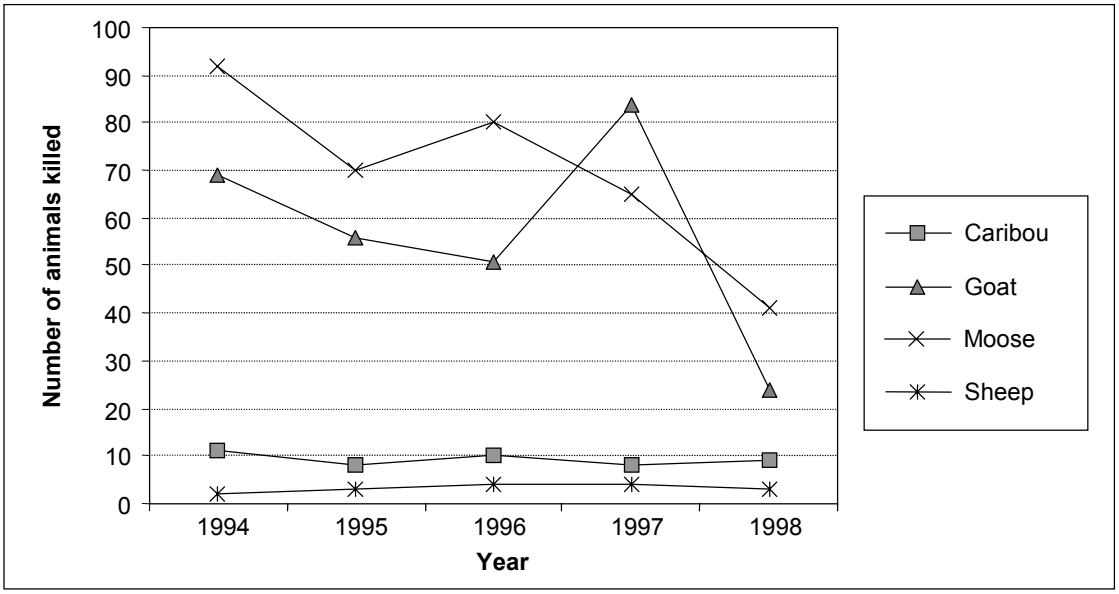

Figure 30—Animals taken by recreational hunters on the Chugach National Forest (Alaska Department of Fish and Game 1999).

These hunting success data, which are for all parties, cannot be directly compared to the hunting effort data shown in figure 29, which are for guided parties under permit. Nonetheless, the combination of the increased [guided] hunting effort and reduced [overall] hunting harvests, together with the statewide increase in nonresident hunting effort, indicates that hunting activity on the forest may be shifting away from independent residents seeking moose for food and toward guided nonresidents seeking other species for sport.

Fishing—The RIM fishing RVDs presented in figure 31 are based on statewide fishing license sales reported by the Alaska Department of Fish and Game. The dip in Seward Ranger District fishing RVDs is an artifact of a change in duration factors or allocation procedures. Later in this paper we present data on actual angler effort from the Alaska Department of Fish and Game sport-fish survey. These data are location-specific and contain actual reported effort levels.

Special use permit fishing—The special use permit data shown in figure 32 are for guided fishing and are only available for the Seward Ranger District. They show significant but flat (or even declining) activity levels from 1995 to 1998.

Figure 33 shows the Alaska Department of Fish and Game statewide fishing license data that drives the changes in reported RIM numbers. The data show that during the past decade, the number of nonresident fishing licenses grew steadily at 5.2 percent per year, whereas the number of resident licenses dropped slightly.[26]

Gathering forest products—Forest products include such things as berries, moss, shells, and medicinal plants. Recreation information management data (fig. 34) show a large increase in gathering of forest products in the Glacier Ranger District beginning in 1995. Presumably this is due to the new information on participation rates provided by the 1995 Chugach National Forest recreation survey.[27]

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[26] The number of resident and nonresident fishing licenses is not indicative of fishing effort by each group. That is, a resident buys a license and may fish many times, whereas most of the nonresident licenses are for a single day or limited period.

[27] There have been no new direct data on participation rates collected since the 1995 survey. The change in activity level from 1995 to 1996 is based on observed growth in other activities.

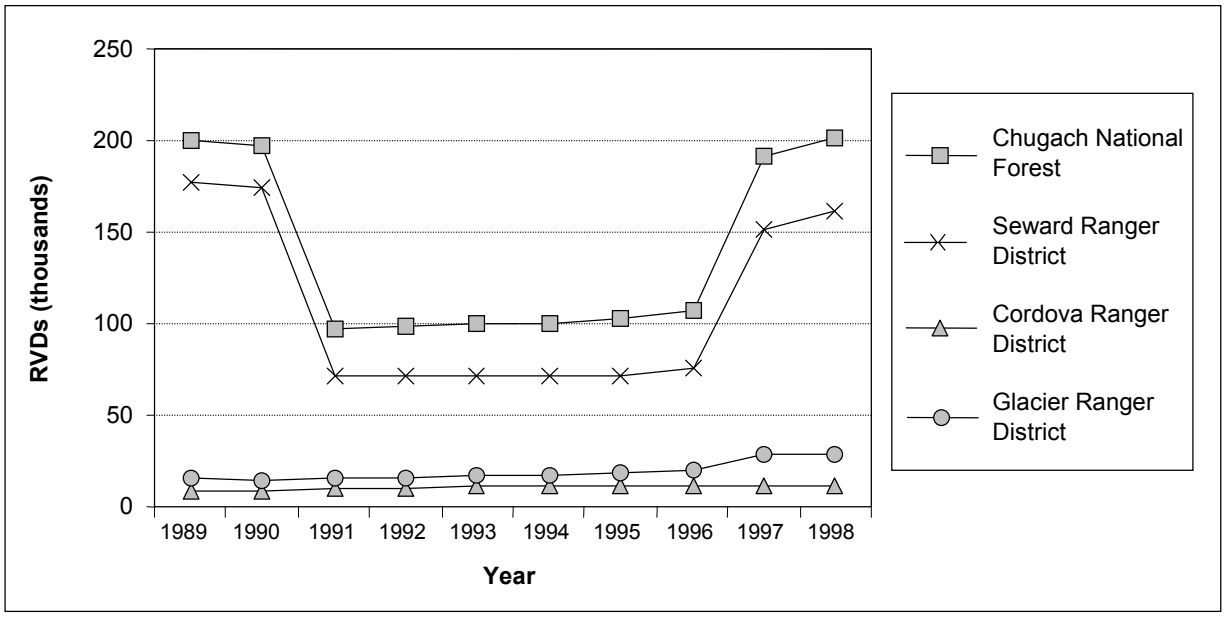

Figure 31—Fishing activity from recreation information management data (USDA Forest Service 1999b). RVD = recreation visitor day.

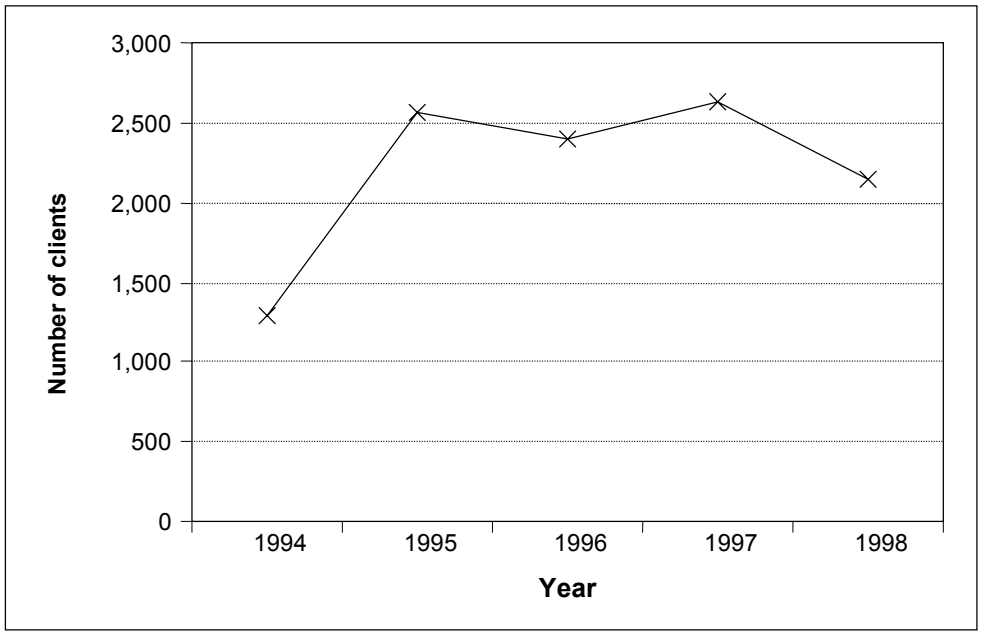

Figure 32—Special use permit fishing (USDA Forest Service 1999d). Note: all data are from Seward Ranger District.

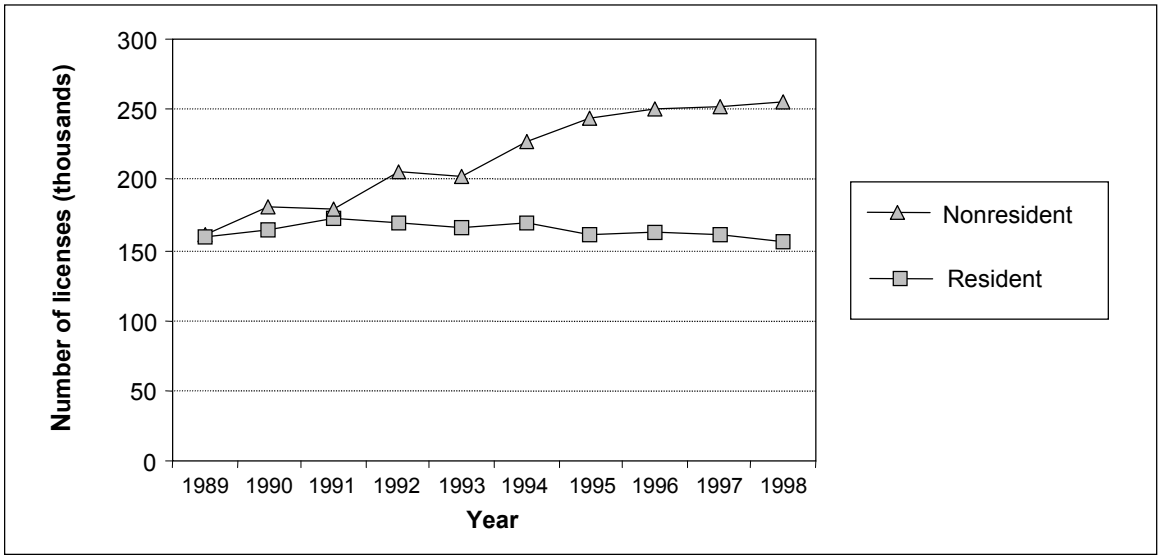

Figure 33—Statewide trend in fishing license sales. Chugach National Forest calculations based on data from Alaska Department of Fish and Game (1989–98).

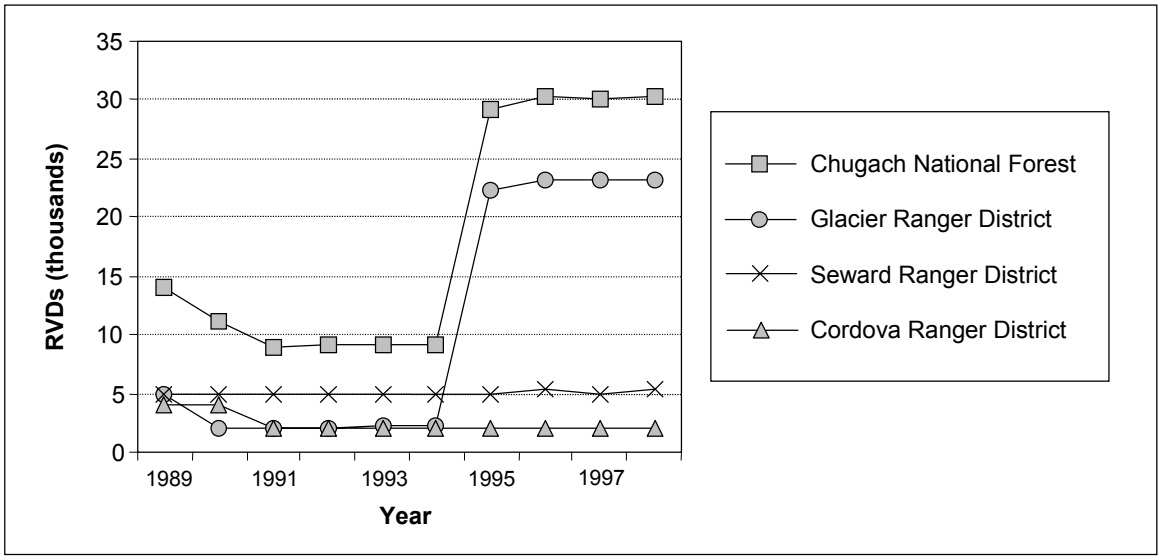

Figure 34—Gathering forest products (USDA Forest Service 1999b).

Helicopters and fixed-wing aircraft[28]— Relatively few RVDs are generated by these activities, which must include a landing on the forest property to qualify for inclusion in the RIM and Infra data.[29] The sharp drop in reported activity in 1997 is due to a change in estimation methods (fig. 35).

The RIM system does not produce separate totals for fixed-wing and helicopter use on the Chugach National Forest. Special use permits are only needed for commercial aircraft landings with an outfitter-guide. Air taxis, private pilots, and aircraft hired to drop off and pick up people do not need permits. The permit data cannot be used to assess unguided activities or strictly airborne

[28] The original source and baseline year for these data are uncertain.

[29] Information on motorized aircraft is updated by using information from one permittee.

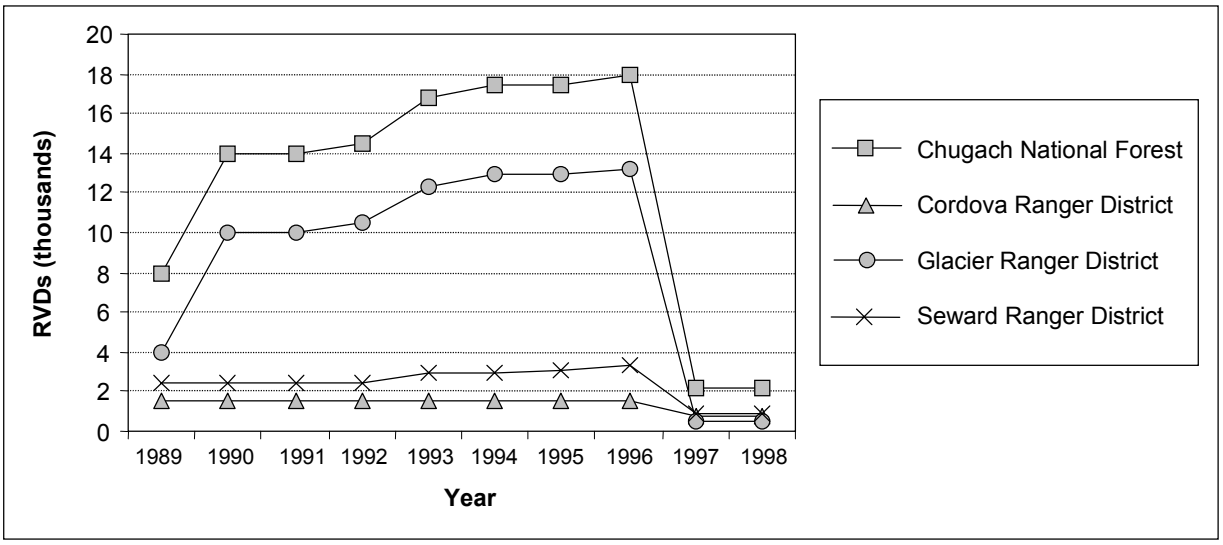

Figure 35—Aircraft travel. RVD = recreation visitor day.

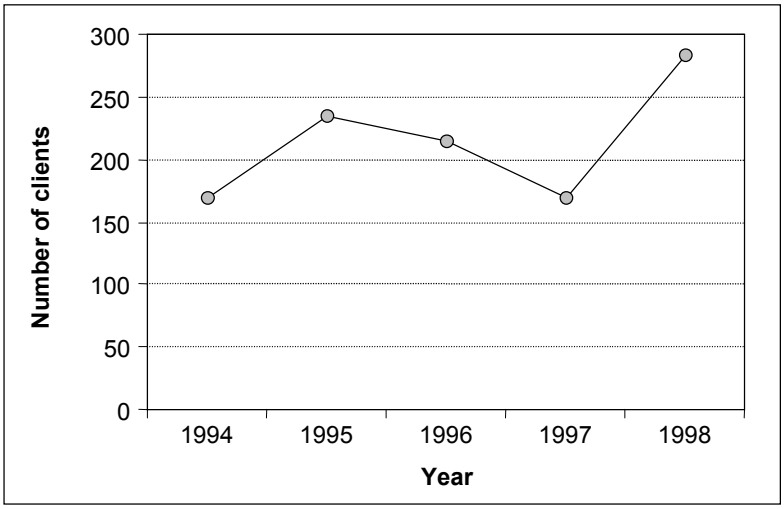

Figure 36—Fixed-wing glacier landings in the Glacier Ranger District under special use permit (USDA Forest Service 1999d).

activities such as "flight-seeing." Permit data indicate that fixed-wing glacier landings increased by almost 70 percent between 1994 and 1998 (fig. 36). All such operations occur in the Glacier Ranger District.

Helicopters— The number of helicopter skiing clients, as reported in the permit use data, rose dramatically—from 290 in 1996 to 419 in 1997 (see footnote 2). No use report was on file for 1998. As part of a 1999 environmental assessment, the Forest Service reported a total of 542 heliskiing client days in 1999 (USDA Forest Service 1999a). Both the environmental assessment and the associated administrative appeals filed in relation to recent heliskiing permit requests suggest that there appear to be growing use conflicts between heliskiers and back-country skiers. The proposed action in this environmental assessment would have limited the number of client days to 800, at least during the 2000 ski season.

Our review of the permits database indicates little summer helicopter landing activity through 1998. Fewer than 100 clients landed on the Eagle Glacier. Of course there is no Forest Service data on helicopter flight-seeing activity that does not involve landings. Our interviews with helicopter operators indicated that Anchorage is not currently viable as a heli-hiking or landing-oriented flight-seeing base because visitors in Anchorage do not consider destinations such as the Chugach National Forest worth the money for this activity. Heli-hiking, however, was reported to be "exploding" on the south side of Denali National Park, having tripled between 1997 and 1999.

Water-based activities—

Floating and rafting—Recreation information management data are collected for "other watercraft." These data show similar levels of RVDs in the Seward and Cordova Ranger Districts and much higher and faster rising levels in the Glacier Ranger District. For recent periods, however, the RIM data are tied directly to changes in special permit use,[30] so it is more revealing to simply look directly at the special use permits data.

Figure 37 shows that special use permit whitewater rafting is growing on the Seward Ranger district, home of the challenging Sixmile Creek whitewater route. Client days on Sixmile Creek have grown at an average rate of 40 percent per year from 1994 to 1998, although the data appear to level off in 1998. In contrast, rafting on the more placid Kenai River is stable, although it might be capacity-constrained.

Kayaking and canoeing—The RIM system groups kayaking and canoeing. The data indicated there was an adjustment made in 1993 (fig. 38). The RIM and Infra data show a further decline of kayaking and canoeing RVDs in 1997. The special use permit data for guided kayaking, however, present different information than the RIM and Infra numbers (fig. 39). The number of guided kayakers is growing rapidly. Most of the kayak activity is in the special use permit areas of western Prince William Sound. It is possible to reconcile these two trends by noting that conceptually, the RIM and Infra systems do not count sea kayakers while they are on the water; instead, these systems count them as campers or cabin users or hikers, depending on how they use forest land. Permittees, however, generally specify sea kayaking as a principal business activity.

The data shown here for the Glacier Ranger District are probably not complete in that they may not reflect the activities of some larger entities that provide several different activities under the same permit.Comprehensive data on sea kayaking activities for western Prince William Sound are presented later in this report.

Visitor Attitudes and Satisfaction

Recreational visitors (both Alaska residents and nonresidents) to the Chugach National Forest were surveyed in 1992 and 1995. Respondents were asked what they consider essential for a high-quality visit, whether they were satisfied with services, and what conditions might diminish the scenic quality of the forest. Respondents in 1992 ranked quality of scenery as most important and cleanliness of restrooms as second in importance. Ninety-seven percent of Alaska residents and 98 percent of nonresidents surveyed in 1995 agreed that maintenance of scenic beauty is essential for a high-quality recreation visit to the Chugach National Forest. Other management actions and visitor services deemed essential by 1995 respondents were:

- Natural resources are well managed and impacts are controlled (about 95 percent of Alaskans and 97 percent of nonresidents).
- Facilities, grounds, and equipment are clean and well maintained (about 94 percent of Alaskans and 95 percent of nonresidents).
- Inappropriate behavior and criminal activity are controlled.

[30] Notes labeled "Methods we used in 1997 for tracking and reporting RVDs on the Chugach National Forest for FY97," provided by Chugach National Forest recreation staff. On file with the authors.

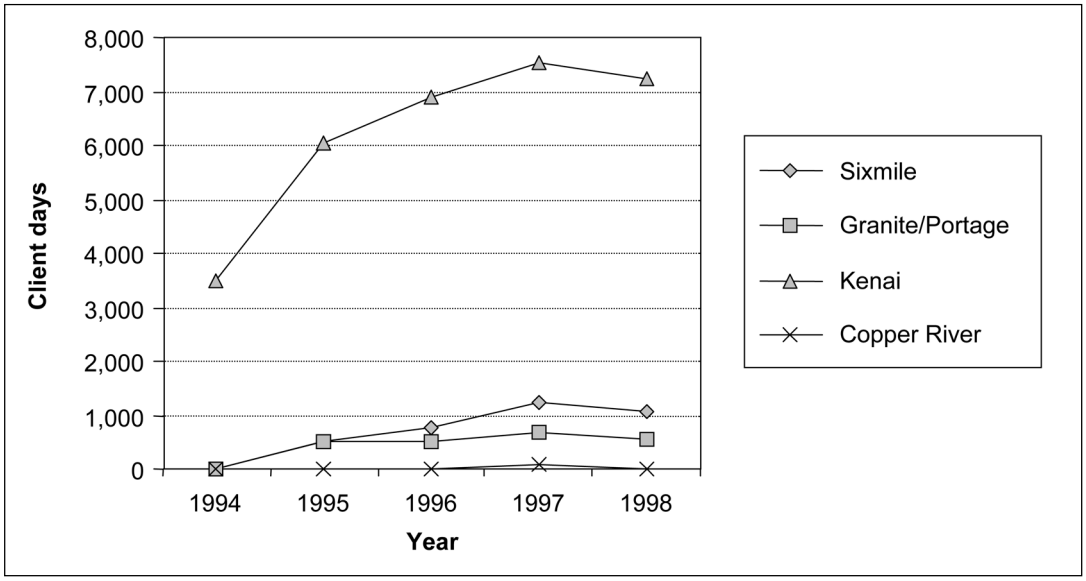

Figure 37—Rafting and floating client days under special use permit (USDA Forest Service 1999d).

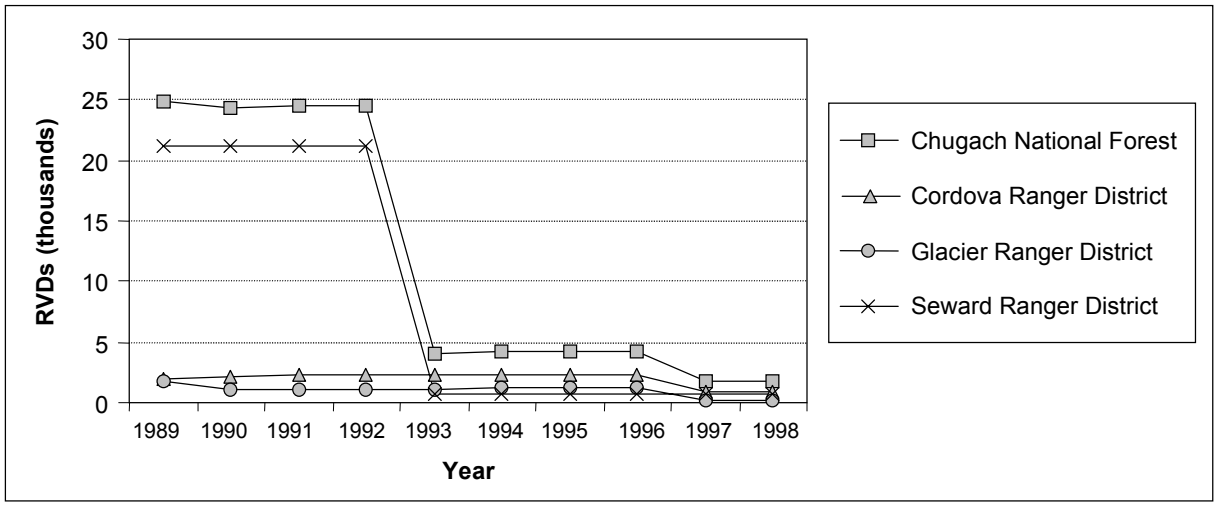

Figure 38—Canoeing and kayaking activity (USDA Forest Service 1999b). RVD = recreation visitor day.

About 97 percent of both Alaskans and nonresidents surveyed in 1995 were satisfied with scenic quality. About 96 percent of both groups said they were satisfied with the way natural resources are managed and impacts are controlled. About 92 percent of residents and 95 percent of nonresidents said they were satisfied with the wildlife viewing opportunities.

From the pool of 1995 respondents, repeat visitors were more likely than first-time visitors to notice conditions that diminish scenic quality. Resident repeat visitors noticed the effects of fire or insect infestation (22 percent), the number or activities of tourists (21 percent), and the appearance of landscapes with human modifications (17 percent). To a lesser degree, nonresidents also noticed the effects of fire or insect infestation (17 percent), the number or activities of tourists

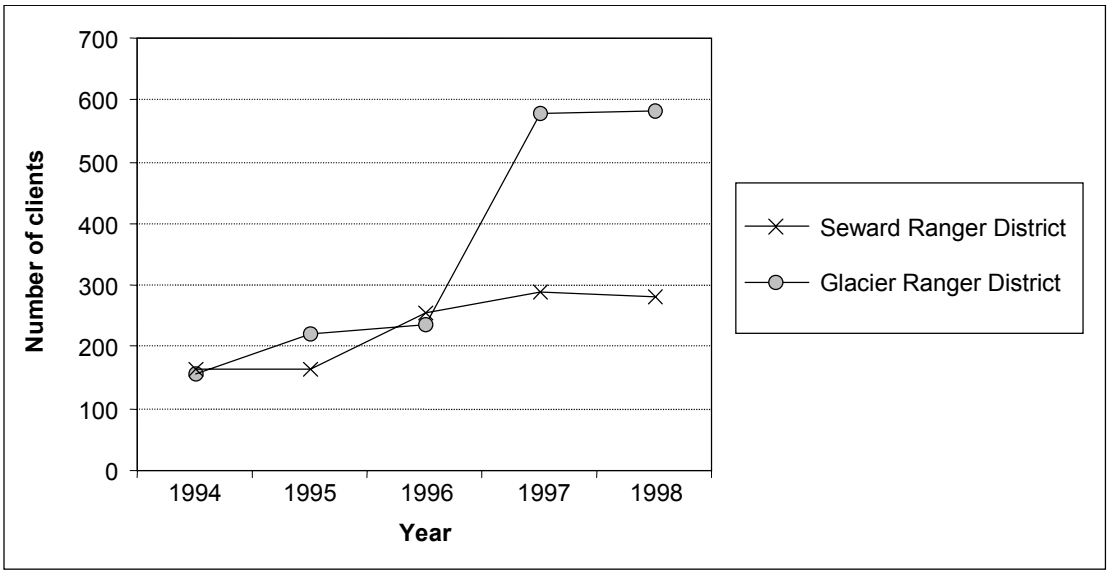

Figure 39—Kayaking under special use permit (USDA Forest Service 1999d).

(2 percent), and the appearance of landscapes with human modifications (19 percent) (USDA Forest Service 1995b).[31]

The 1979 Alaska Public Survey (APS) asked a large random sample of Alaska residents several questions about land use, values, and attitudes toward tourism (Alves 1980). The survey results for the south-central Alaska sample produced 1,258 usable responses. The APS results cannot be used here for a rigorous comparison with the 1992 and 1995 Chugach National Forest recreation surveys, largely because the APS did not differentiate between the use of the Chugach and Tongass National Forests. In addition, the APS did not ask about specific activities on Forest Service lands other than use of facilities and trails, and the raw data from the 1995 Chugach National Forest survey were unavailable for further analysis. In spite of these and other limitations, the APS survey results suggest some interesting comparisons with the more recent survey data from the Forest Service and with data from the Alaska statewide comprehensive outdoor recreation plan (SCORP) (Alaska Department of Natural Resources 1999). Equally interesting are the changes in management concerns as revealed by the types of questions asked.

First, all the surveys show Alaskans have a persistent desire for fishing, camping, and scenery viewing opportunities. The APS revealed these desires on a general basis, without regard for specific geographic locations. Because of the APS design, it is not possible to tell whether people in 1979 felt their desires were being fulfilled.

Second, the problem of crowding and conflicts between competing recreational users and activities seems to be increasingly important. The APS asked about crowding in recreation areas statewide, not just on the national forests. The results showed that in 1979, only about half of the respondents said that they had "already noticed" "more recreationists" in their self-reported "favorite place." More than 95 percent of people using facilities on the two national forests reported that there were no conflicts with any other activities. The most frequently listed conflicts were between recreational use and logging or wildlife.

[31] This document provides tabulations rather than raw data. Consequently, we do not have actual counts and cannot determine whether differences between residents and nonresidents are statistically significant. For the 1992 survey, we do not have the questionnaire.

By 1997, however, a summary of findings from the SCORP surveys noted that "Since the last survey in 1992, the number of people who are dissatisfied with their park experience because of crowding is significantly up. Alaskans want more motorized and nonmotorized trails" (Alaska Department of Natural Resources 1999). Concern over crowding and conflicts between competing recreational uses also are mentioned in much of the data reviewed for this study.

This comparison shows that recreation has become more motorized since 1979. Helicopter tours and heliskiing were not mentioned in the 1979 APS. The APS results showed that more people went tent camping than camping with a recreational vehicle (RV). "Snow machine use" was not explicitly listed as a response category in the APS. It was included in "winter off-road travel" or more generally in "off-road travel." And conflicts between motorized and nonmotorized recreation activities were mentioned by none of the 1,258 APS respondents in the south-central Alaska sample.

In summary, this limited comparison of admittedly dissimilar surveys suggests that the underlying preferences of Alaskans for activities and scenic quality have not changed. What has changed is the number of people and their use of motorized technology. As a result, conflicts between specific recreational activities appear to have become more important than conflicts between recreation and other economic uses of forest lands.

The Western Prince William Sound

For the past 12 years (1987 to 1998), data have been collected on back-country use patterns in western Prince William Sound.[32] All known sea kayak guides, outfitters, charter boats, lodges, and rental businesses operating in western Prince William Sound were surveyed about their detailed travel patterns. Public use cabin occupancy data were obtained from the Forest Service for the six cabins in the study area. With this information, a detailed database was compiled of use on specific beaches over time. This database is equivalent to a census of all known kayak-related travel using charter boats for pickup and dropoff or using organized guide, outfitter, and instructor services.

As part of the same research, a one-time random sample survey was taken of all kayak activity—including independent, nonguided, and nonchartered travel—by measuring disembarking passengers at the Whittier end of the Alaska Railroad shuttle during summer 1998. This made it possible to estimate a multiplier to apply to the panel data on guided and chartered use. Using the multiplier, we can estimate total back-country overnight use of the western Prince William Sound.

The following discussion is based on our analysis of the raw data as well as that of Twardock and Monz (2000). The use covered by these data is measured in terms of user nights. We have made no attempt to normalize user nights to conform to a particular number of hours or to convert them into the RVD scales used by the Forest Service to measure other activities. Also, because of the inherent complexity of travel patterns and the lack of diary-based data, it is impossible to avoid some double-counting and undercounting of visitor nights. It is best, therefore, to focus on changes over time and the distribution of activity across beaches rather than absolute levels.

Total Measured Use

Total measured use increased at an annual rate of 6.1 percent; it grew from 6,575 visitor days in 1987 to about 12,626 visitor days per season in 1998. This total, however, includes the dramatic growth of nights in lodges that began in 1996.[33] Excluding these visitor nights, the adjusted number of overnights in 1998 drops to 11,121, and the annual growth rate is reduced to 5 percent.

Table 7 shows that the number of chartered independent travelers increased most dramatically, growing more than tenfold during the past decade.

[32] Data collected by Paul Twardock, professor of outdoor studies, Alaska Pacific University, 4101 University Drive, Anchorage, AK 99508.

[33] Much of this use is on Growler Island, on private land.

Table 7—Back-country overnights in western Prince William Sound

Year	Guided	Chartered	Cabin	Lodge	Total	Total without lodge
1987	3,874	222	2,479	—	6,575	6,575
1988	3,521	360	2,173	—	6,053	6,053
1989	1,915	465	2,104	—	4,484	4,484
1990	3,486	875	2,233	—	6,593	6,593
1991	4,505	1,037	2,579	—	8,121	8,121
1992	5,037	954	2,504	—	8,494	8,494
1993	3,196	1,100	2,932	—	7,227	7,227
1994	3,227	1,740	2,681	—	7,648	7,648
1995	3,511	1,767	3,078	—	8,356	8,356
1996	2,747	1,771	3,403	400	8,321	7,921
1997	4,497	2,660	1,835	1,200	10,192	8,992
1998	6,097	2,874	2,150	1,505	12,626	11,121
Total	45,614	15,824	30,151	3,105	94,693	91,588
Average annual growth, 1987–98:						
			Percent			
	4.2	26.2	-1.3	—	6.1	4.9

Guided use (including educational courses) has increased by about 50 percent, whereas Forest Service cabin use has remained flat, consistent with capacity constraints (fig. 40).

Geography of Activity Patterns

The growth in charter (water taxi) use could indicate that people are attempting to get away from familiar or crowded areas by substituting charter boat time for paddling time. We tested this hypothesis by comparing the 1987 pattern of use vs. distance from Whittier to the 1998 pattern. We found that, in fact, the use is not radiating out from Whittier. Instead, it seems to be continuing to increase most rapidly in areas that are relatively nearby (fig. 41). Further support for this can be seen by looking at changes in use within specific management areas. Figure 42 shows that some of the greatest growth in use has occurred in Blackstone Bay and Harriman Fiord—two spectacular areas near Whittier.

Responding to the demand, the water taxi industry also has expanded. Barriers to entry are relatively low, and the business is competitive. Recent interviews indicate that a third charter provider is trying to enter the market previously dominated by two long-established water taxis serving kayakers in western Prince William Sound.

Overall, the data on beach usage are consistent with a "life cycle" model of back-country use. Individuals first take up the activity by starting out on day trips or short-duration overnights on beaches near Whittier. With increasing experience, they move on to more distant destinations. This movement creates a pattern of increasing use over time at all distances from Whittier. It is not possible to make a direct conclusion from these data whether people who used to paddle out of or back to Whittier are now substituting a water taxi ride to save time or extend their time near the glaciers. Given the distance to Harriman Fiord (about 129 kilometers round trip), however, the growth in visitation there is consistent with increased use of a water taxi service. Also, most users do not seem to consider highly used areas such as Harriman Fiord or Blackstone Bay as saturated. As figure 43 shows, the growth in use of these areas does not seem to be leveling off. This does not mean, however, that some people are not choosing to go elsewhere because of perceived crowding.

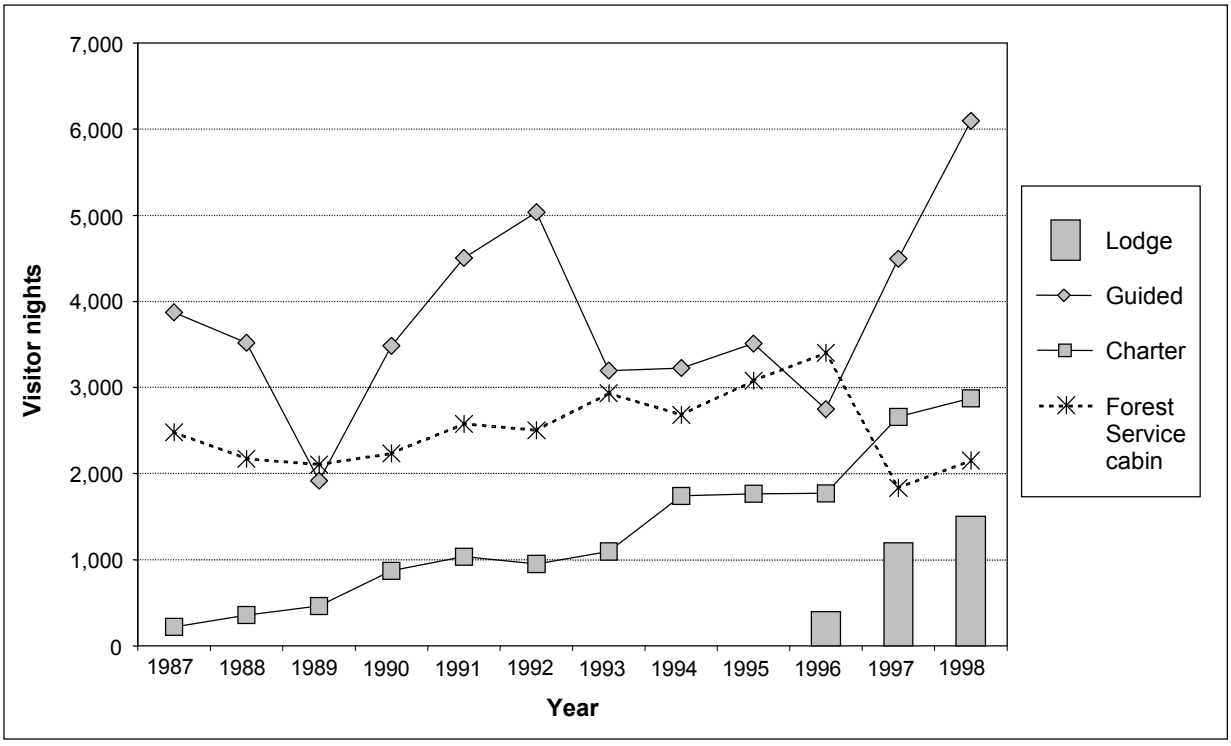

Figure 40—Back-country use trends in Prince William Sound.

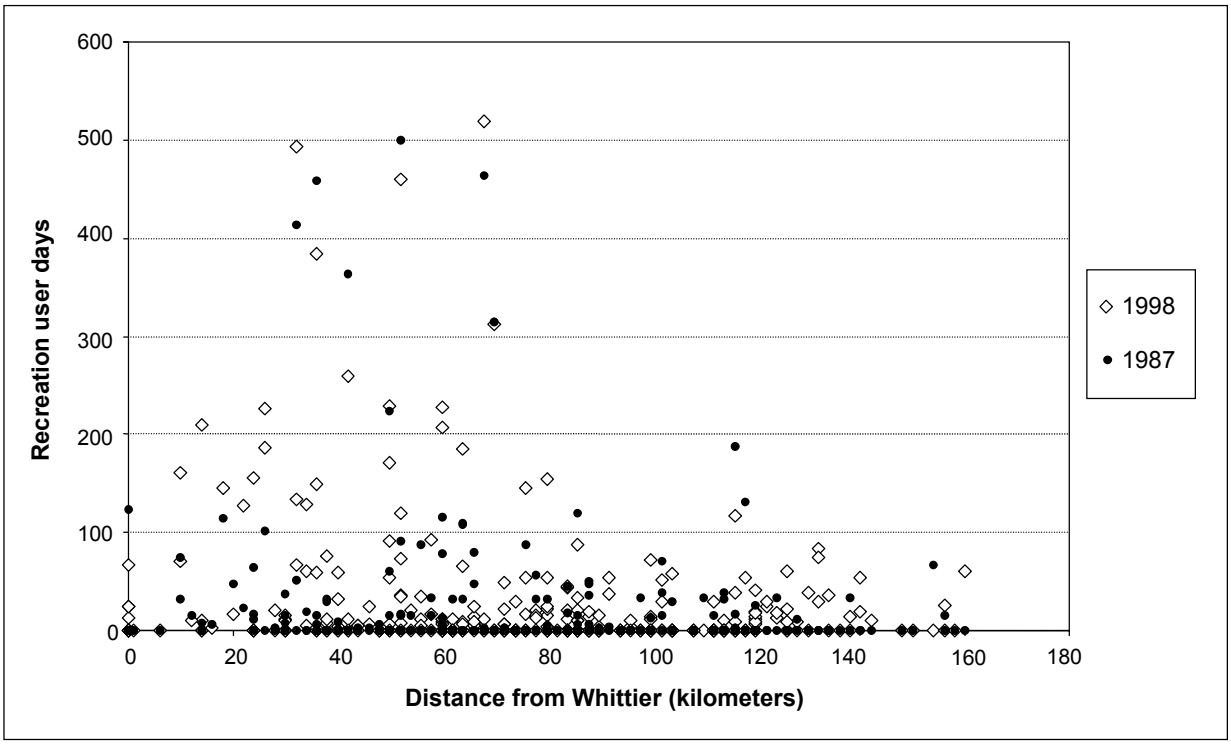

Figure 41—Back-country overnights vs. distance from Whittier, 1987 and 1998.

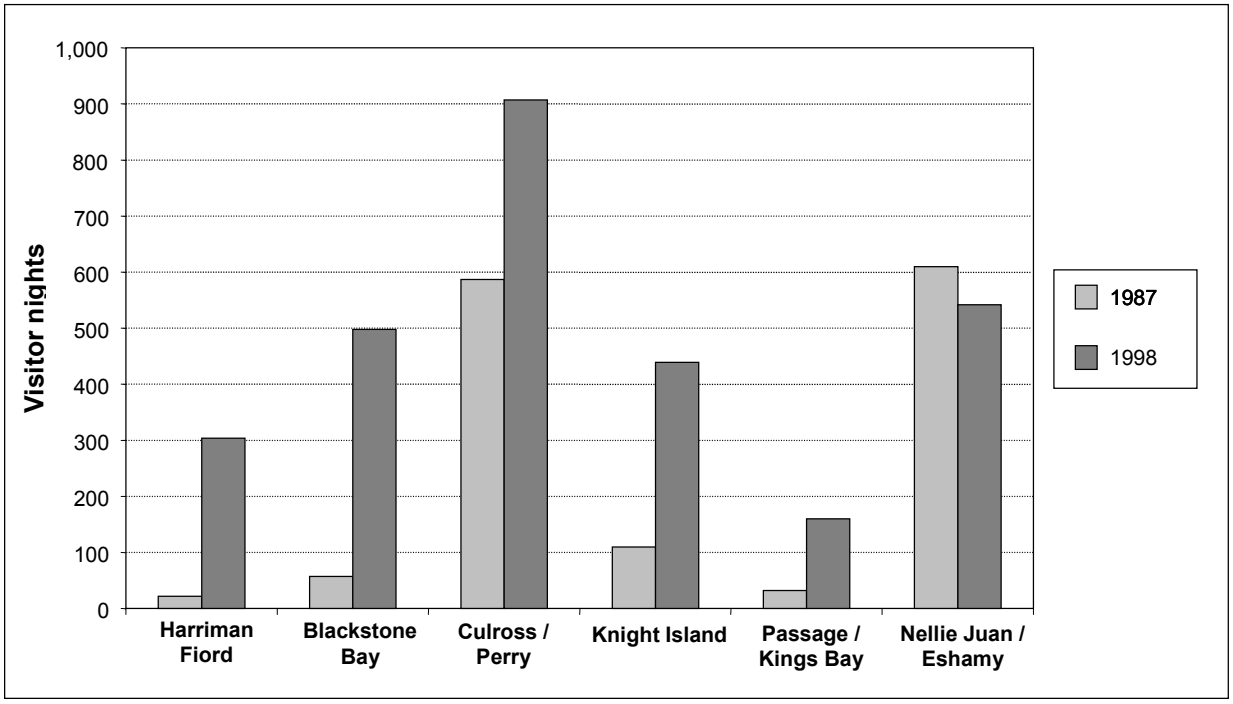

Figure 42—Use in selected management areas.

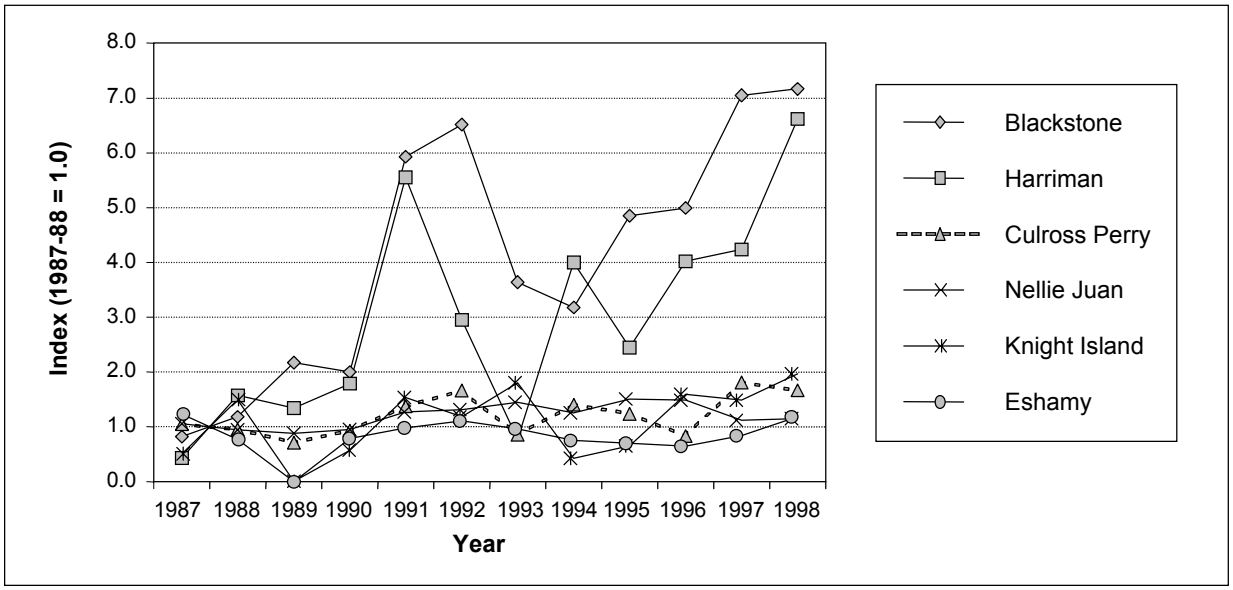

Figure 43—Growth in back-country use in selected management areas.

End of Part B. Click here for Part C.

Part C — continued from Part B

Chapter 3: Review of Other Quantitative Data

Introduction

In this chapter, we expand the geographic focus to include all of south-central Alaska. We review quantitative data from several sources, each of which sheds some light on recreation and tourism patterns. None of these data sources was developed or designed to collect direct information on Alaska resident recreation patterns by region. For example, there are direct data on nonresident tourism activities, as well as information on visits to national parks. Each of these information sources provides a partial view of the recreation and tourism sector.

Alaska Visitor Statistics Program

The Alaska Visitor Statistics Program (AVSP) was started in the early 1980s to collect comprehensive data about nonresidents visiting Alaska. Because of budget cuts, however, the AVSP has not collected any primary field data from individuals (on, e.g., visitor origins, purpose, or independent vs. package status) since 1993. The AVSP was never intended to, and did not, consider the travel or recreation patterns of Alaska residents.

Table 8 and figure 44 support the conclusion that total summer Visitor[1] growth "appears to have leveled off during 1988" (McDowell Group 1999). Between 1997 and 1998, domestic air arrivals actually declined by 1.6 percent while the growth rate of all Visitors slowed to only 3.8 percent.

Visitor Travel to South-Central Alaska Vs. Statewide

No regional visitation data have been collected since 1993. In that year, 67 percent of summer arrivals, or about 569,000 Visitors, traveled in south-central Alaska. Some estimate of regional growth in arrivals can be made by estimating the number of cruise ship passengers who traveled only to southeast Alaska and removing them from total cruise ship passengers. When we make this adjustment, we can conclude that total Visitor arrivals to south-central Alaska actually declined by about 1 percent between 1997 and 1998. The implied number of Visitors to south-central Alaska in 1998 is 851,000.

Visitor Vs. Alaska Resident Demand

Many official documents and planning efforts fail to consider Alaska residents as a source of demand for recreation and tourism activities.[2] If the average length of stay in Alaska by Visitors for vacation or pleasure remains at the 1993 level of about 10 days per person (McDowell Group 1994), and the average person spends 5 of those days in south-central Alaska, then the total number of Visitor days in south-central Alaska is about 4.2 million. This number can be compared to the 1998 south-central Alaska population (about 372,000), which generates a potential resident visitor day count of about 15 million, by using summer weekend days alone. The Anchorage population of about 260,000 generates more than two-thirds of potential resident demand. These crude calculations suggest that resident demand may be as much as four times as high as Visitor demand, although the relative strength of the two sources will clearly differ by activity (table 9).

These calculations are broadly supported by proprietary survey data from the Matanuska-Susitna Convention and Visitors' Bureau. Their data show that a significant share of Anchorage residents reported making many trips to the Mat-Su Borough during recent years, during both summer and winter seasons.[3] The Mat-Su Borough is a close economic substitute to the Chugach National Forest for many users and

[1] In keeping with industry custom in this section, we denote nonresidents as Visitors with a capital V.

[2] For the purpose of statewide marketing, this focus on nonresidents makes sense. However, it is less appropriate for regional or local planning efforts.

[3] The specific data remain confidential by agreement with the Mat-Su Convention and Visitors' Bureau.

Table 8—Summer visitor arrivals to Alaska[a]

Year	Total visitor arrivals	Year/year percent change	Cruise	Domestic air	International air	Highway	Ferry	Other
1989	609	—	152	313	18	83	27	16
1990	690	13	187	354	20	84	28	16
1991	727	5	194	386	19	83	30	15
1992	782	8	212	413	15	99	27	16
1993	846	8	247	444	15	92	29	20
1994	931	10	285	488	14	95	28	20
1995	967	4	284	508	13	108	27	27
1996	1,064	10	337	548	23	103	24	30
1997	1,121	5	392	561	21	100	19	28
1998	1,164	4	431	552	20	112	22	28
Average annual growth:								
				Percent				
1989–98	7.0	—	11.1	6.7	1.5	2.2	-3.9	6.4
1989–93	8.6	—	12.9	9.1	-5.8	2.7	1.9	6.2
1993–98	6.6	—	11.8	4.5	6.6	4.0	-5.8	6.5
1997–98	3.8	—	10.0	-1.6	-4.8	11.5	14.3	.4

[a]All years include May data.

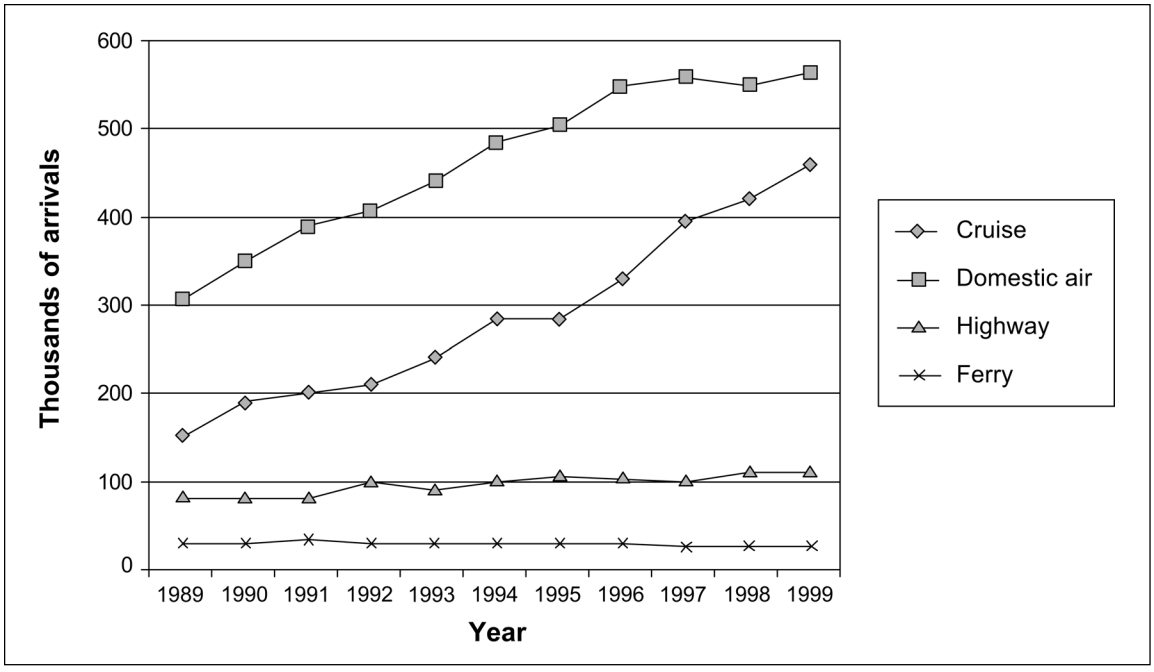

Figure 44—Summer visitor arrivals in Alaska in 1989–99. Note: summer = May–September inclusive.

Table 9—Potential recreation demand from Alaska residents

Region of residence	1 July 1998 population	Summer weekend days	Potential visitor days
Anchorage	258,782	40	10,351,280
Mat-Su Borough	54,526	40	2,181,040
Kenai Borough	48,815	40	1,952,600
Valdez-Cordova census area	10,365	40	414,600
Total south-central Alaska	372,488		14,899,520

activities. The two areas are in opposite directions from Anchorage and about the same distance away.

Cruise Industry Data and Outlook

About one half of all summer Visitors to Alaska are cruise ship passengers. Decisions by the cruise industry to deploy capacity to various routes or ports can have a major impact on tourism levels and trends in specific places. Once a capacity deployment decision is made, the industry uses a sophisticated combination of aggressive pricing and marketing strategies to ensure that all berths are in fact sold, since the incremental cost of an additional passenger is low.

The Alaska cruise industry offers two major products. The Inside Passage route is a 1-week loop from Vancouver, British Columbia, through southeast Alaska to Skagway and back. The Gulf of Alaska route is a 1-week, one-way trip between Vancouver, British Columbia, and Seward or Whittier. In 1999, all ships on the gulf route used Seward as their terminal. The Inside Passage route is wholly within southeast Alaska.

The gulf route affects south-central Alaska in several ways. First, all gulf route ships use Seward as a ship terminal. Second, essentially all gulf route passengers use Anchorage as their air terminal. Many stay overnight in Anchorage as part of the arrival or departure process. Third, about half of all cruise passengers in Alaska take some sort of land tour in addition to their shipboard experience. The cruise industry is therefore a major source of demand for land-based tourism products (including its own branded offerings). Excursions to Denali National Park are the most popular land tours for gulf route cruise passengers (Dow 1999).

Table 10 summarizes the growth in Alaska cruise industry capacity. Capacity grew rapidly during the mid-1990s. The most rapid growth occurred in the Gulf of Alaska market, which grew twice as fast as the Inside Passage market during the 5 years from 1993 to 1998. Since 1998, overall growth has slowed and gulf route capacity has dropped slightly.

Total capacity on the gulf route has been increasing during the past decade because of the replacement of smaller older ships with newer, larger ships. Average passengers per Seward docking jumped 62 percent, from 1,750 in 1993 to 2,830 in 2000. As figure 45 shows, this phenomenon is reflected in increased passenger counts along with flat or decreased numbers of dockings. This trend is important for forest managers because it increases the "lumpiness" of passenger flows through south-central Alaska. It is harder to spread out 3,000 than 2,000 passengers.

Princess and Holland America together supply about 80 percent of the bed space on the gulf route (table 11). According to executives at these two firms (Ball 1999, Dow 1999, Pedlar 1999), there are no current plans to terminate voyages in Whittier. Furthermore, the recent growth in Alaska cruise traffic reflects the healthy U.S. economy and the overall demand for cruising, rather than a specific surge in demand for Alaska experiences. Alaska has maintained a relatively constant share of the world cruise market during

Table 10—Alaska cruise ship bed capacity by major route

Year	Total beds	Inside Passage	Gulf Coast	Gulf Coast share
				Percent
1992	275,714	164,130	111,584	40
1993	317,363	189,640	127,723	40
1994	373,473	191,378	182,095	49
1995	401,013	184,288	216,725	54
1996	440,916	211,684	229,232	52
1997	494,092	259,108	234,984	48
1998	547,142	268,994	278,148	51
1999	563,058	286,154	276,904	49
2000	595,336	320,390	274,946	46
Average annual growth:				
		Percent		
1992–99	10.7	8.3	13.9	
1993–98	11.5	7.2	16.8	
1998–2000	4.3	9.1	-.6	

Source: Princess Tours, "Alaska Bed Supply," mimeo. On file at Institute of Social and Economic Research.

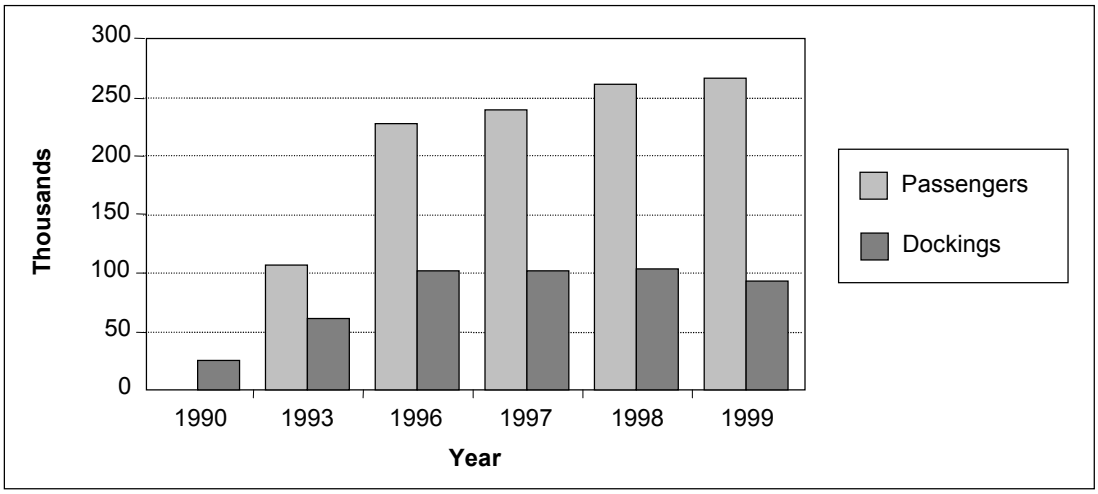

Figure 45—Seward cruise ship dockings and passengers.

the past 10 years. Executives from both companies emphasized the fundamental economic fact that drives the industry—huge capital investments in ships that can, and must, be deployed for maximum profitability. As one put it:

> Change in capacity and deployment will relate to a myriad [of factors] . . . What do we think is the inherent demand [for cruise experiences]? What destinations are doing a better job of stimulating demand? And what are the overall costs of doing business in the trade? All of those things affect us, and that's where the incremental ship goes. When you get the new ship, you go "OK, what's the cost of acquisition, what's the cost of doing business there, what can we do, what can we make," and that's where we put it . . . . It isn't automatic that just because you get 20 percent more capacity [from worldwide growth], Alaska gets 2 percent of it. It is not just a rote formula;

Table 11—Seward cruise passengers and dockings

Year	Princess	Holland America	Other	Total passengers	Total dockings
1990	—	—	—	—	25
1993	—	—	—	106,570	61
1996	108,182	64,108	54,078	226,368	101
1997	125,713	59,695	52,829	238,237	101
1998	133,373	68,816	58,929	261,118	104
1999[a]	—	—	—	265,828	94

[a] 1999 dockings estimated from 1999 schedule. 1999 passengers estimated from berth space data and 96 percent capacity uses.

Source: Princess, Cruise Line Agencies of Alaska.

> you take a hard look at what you can make, and if the economics of doing business change in the destination, which there's a lot of talk about right now, and then decide where you're going to put your ships (Pedlar and Ball 1999).

Officials from both companies expressed concern about future access to public lands for large numbers of cruise passengers. These passengers will increasingly consist of both adventurous baby boomers and increased numbers of families with children. Both these groups are likely to want more direct contact with the land. They can be "scattered" into groups of manageable size, but only if there are adequate facilities (such as trails) available to accommodate them.

Highway Traffic Counts

The Alaska Department of Transportation and Public Facilities maintains traffic counters at several locations throughout south-central Alaska. The traffic counts seem generally to corroborate the overall slowdown in recreation and tourism growth developed above. The main counter at the Placer River "gateway" from Anchorage to the Kenai Peninsula shows essentially zero growth in average annual daily traffic from 1995 through 1997, after growing at about 3 percent per year from 1990 through 1995 (table 12).

Table 12—Placer River traffic counts

Year	Annual average daily traffic
1990	2,820
1991	2,780
1992	3,015
1993	3,150
1994	3,195
1995	3,295
1996	3,275
1997	3,300
Average annual growth:	
	Percent
1990–95	3.2
1995–98	.1

It is difficult to draw any strong conclusions about specific periods such as summer vs. winter. Some of the data, however, agree with interview opinions that winter visits to the Seward area (including snow machine users visiting the popular Lost Lake area) have increased. The traffic measured at Moose Pass is a good proxy for Seward-bound vehicles. Figure 46 shows that summer traffic has not increased at Placer River or at Moose Pass. In contrast, figure 47 shows that winter weekend traffic has increased somewhat at both places.

National Parks

Some of the vigorous growth in Chugach National Forest activities may be driven by displaced national park visitors. The forest abuts Kenai Fjords National Park to the southwest and Wrangell-St. Elias National Park to the northeast. This section provides a factual context for judging the importance of these possible spillover effects.

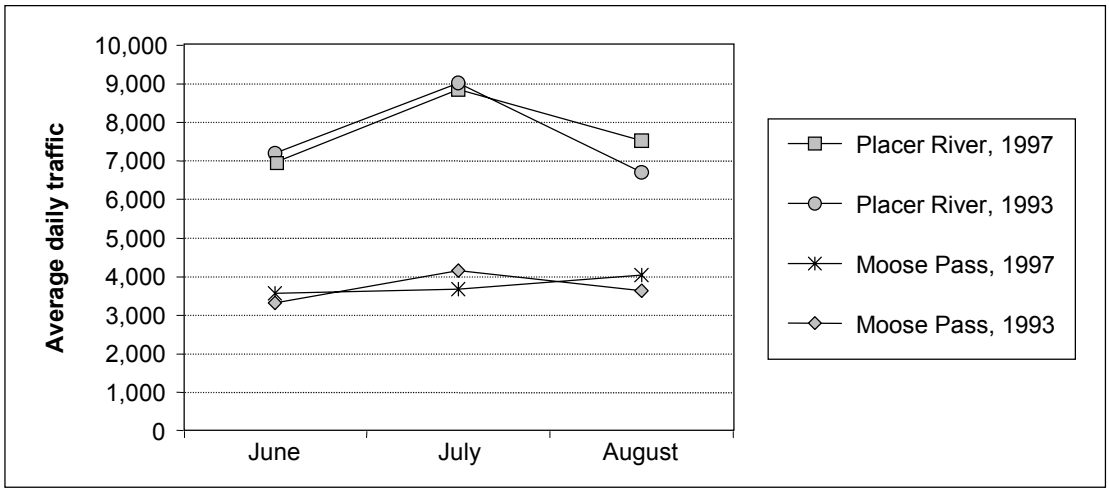

Figure 46—Summer traffic at Placer River and Moose Pass, Saturdays 1993 and 1997.

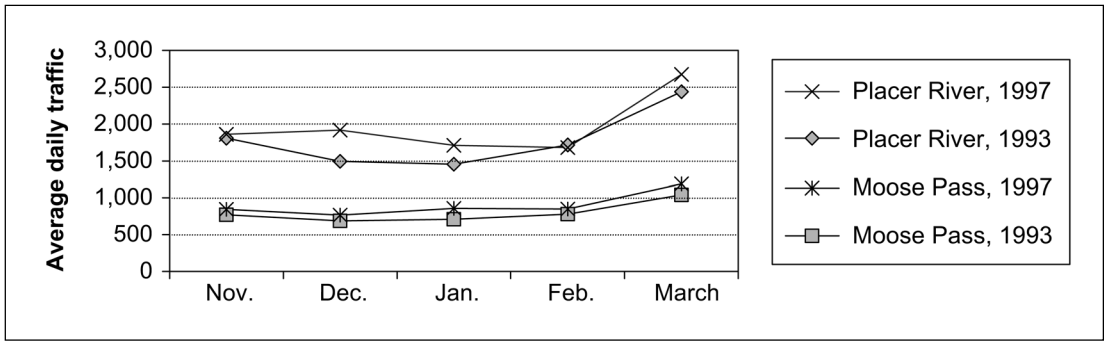

Figure 47—Winter weekend traffic at Placer River and Moose Pass, 1993 and 1997.

Alaska's national parks are world-class destinations that form the centerpiece of many people's itineraries. The most popular parks are crowded during peak summer months and, consequently, some people are beginning to look for alternative places to visit. For example, Princess Tours recently built a wilderness resort on the south side of Denali, well outside the national park boundary. During the next decade, similar capacity additions could be made on Kenai Peninsula lands close to the Chugach National Forest, or even in Prince William Sound itself (using Native or state of Alaska lands).

Because economies of scale and consumer preferences both favor the established park destinations, the organized high-volume tourism operators are unlikely to make major shifts toward areas like the forest until future growth in demand meets hard-and-fast capacity constraints in the parks. However, smaller operators, independent travelers, and Alaska residents have little or no fixed costs and are not as locked in to standard destinations.

Denali National Park remains Alaska's most popular park destination, but visitation of Kenai Fjords National Park has grown tremendously and now rivals that of Denali (fig. 48). It may be that 95 percent of recorded use there occurs at one mecca attraction, Exit Glacier. The official Kenai Fjords visitor counts do not seem to include the people going on the popular coastal day cruise. The capacity of the Kenai Fjords day cruise fleet has reached at least 1,200 passengers per day (Beck, n.d.), which implies perhaps 50,000 to 100,000 additional summer visitors—beyond those counted in park statistics—to the coastal waters of the park.

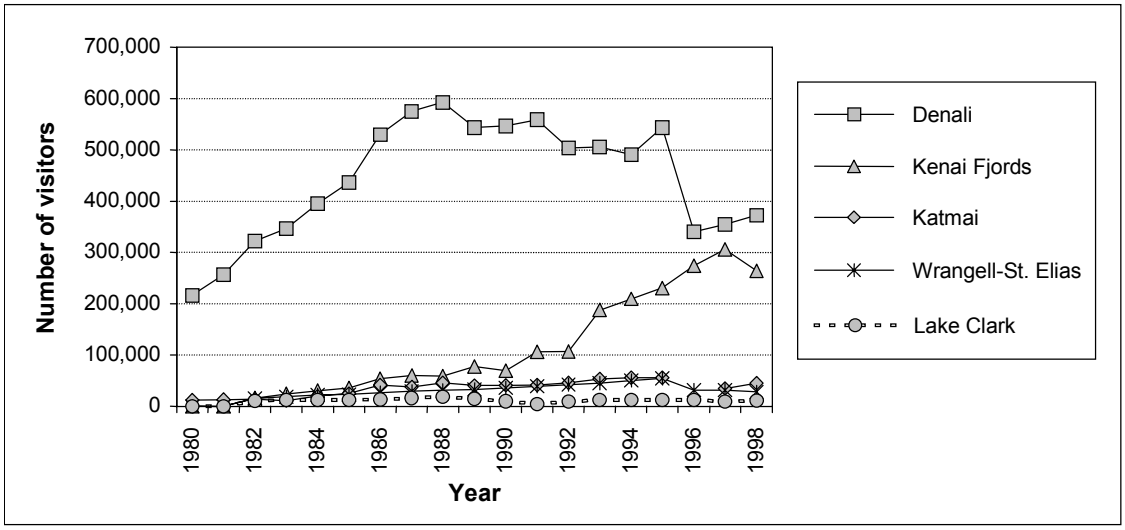

Figure 48—National park visitation trends.

Data collection problems and procedure changes likely account for the declines shown in the following summary of visitation data (fig. 48). (See app. 1 for a discussion of National Park Service data collection and computational methods.) Total use at Denali and Kenai Fjords has probably continued to grow during the past 3 years relative to previous years. It seems fair to conclude, however, that growth is slow or flat at Denali owing to capacity constraints on road traffic. Similar constraints are not yet affecting Kenai Fjords, but as more people visit this park, there may be some spillover effects onto adjacent areas of the forest. For example, if the trails leading up the side of Exit Glacier (in the park) become saturated, visitors may migrate to the nearby Lost Lake trail (on the forest).

Data on visitors and visitor hours suggests that a visitor spent about 45 hours in Wrangell-St. Elias National Park compared to the 3 hours spent in Kenai Fjords (figs. 48 and 49). Again, the inclusion of Kenai Fjords day cruise data would dramatically change this conclusion as these cruises average 6 plus hours.

Visitor profile studies done at Kenai Fjords (Hansen 1994) and Wrangell-St. Elias National Park (Littlejohn 1996) paint similar pictures of demographics and use patterns for these two parks that abut the forest.

About 10 percent of visitors are foreigners, and about 20 to 25 percent are Alaskans. The Kenai Fjords figure for Alaskans is likely to be low because it is based on self-selected visitor sign-ins. Park visitors are less likely to sign guest books when in their own state. These data are also consistent with interviews that suggest about 10 to 15 percent of visitors to Alaska's public lands are from outside the United States (table 13).

Back-country use is a small percentage of total use. Less than 15 percent of Wrangell-St. Elias visitors stayed overnight in the back-country, and only about one half of 1 percent of Kenai Fjords visitors stayed overnight in the back-country in 1998 (table 14).

One obvious implication of these data is that Wrangell-St. Elias has the capacity to absorb additional back-country visitors. These visitors are not likely to be "spilling" southwest into the Cordova Ranger District of the Chugach National Forest.

Alaska State Parks Data

We collected data on visitation and use at several Alaska state parks. After discussions with state parks personnel, however, we find these data to be unreliable time series. If the most recent data are accurate, they suggest there were about 2.1 million visits to state parks in south-central Alaska

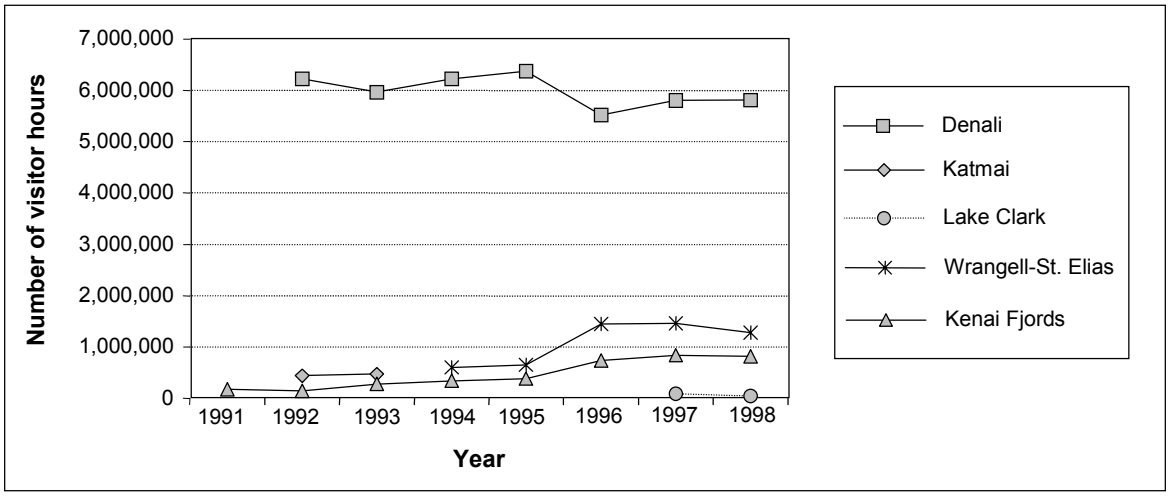

Figure 49—National park visitation hours.

Table 13—Composition of park visitors

Region	Kenai Fjords[a] (1992)	Wrangell-St. Elias[b] (1995)
	Percent	
Alaska	13	28
Other U.S.	76	62
International	11	11
Europe	NA	9
Canada	NA	1
Asia	NA	0
Other international	NA	1

NA = not available.

[a] Based on visitor center sign-ins.

[b] Based on random sampling at various locations.

Table 14—Kenai Fjords National Park use by activity

Year	Visitor center day use	Exit Glacier day use	Exit Glacier overnight	Other back-country overnight	Total visitors
1990	28,259	37,670	691	562	67,182
Percent of total	42	56	1	1	100
1993	62,116	123,453	904	1,595	188,068
Percent of total	33	66	0	1	100

in 1998. These were split roughly between the Mat-Su Borough, Chugach State Park, and Kenai Peninsula parks. There are no data on length of stay.

Community Indicators

Listed below is a representative selection of community indicators from key communities near the forest. Taken together, these indicators support the conclusion that recreation and tourism activities as measured by specific commercial activities such as transportation, lodging, and cruise ship dockings are currently flat or even declining after several years of rapid growth during the early 1990s.

Seward: cruise ship activity—Cruise ships flocked to Seward in the early 1990s when Whittier levied a head tax on passengers. According to Hansen (1994), the captains would prefer to dock at Whittier because the trip to Seward makes the overall steaming schedule tighter. Senior cruise line managers, however, have not indicated any intent to return to Whittier even with the new road in place (Ball 1999, Dow 1999, Pedlar 1999). As figure 50 shows, total dockings have been flat or declining since 1996. Owing to larger ships, total passengers increased through 1999, but total bed capacity declined in 2000 because one ship was redeployed from the Gulf of Alaska route to the southeast Alaska Inside Passage.

Valdez: bed tax receipts and cruise ship counts—Valdez has a bed tax, which can be interpreted, with caution, as an indicator of overall recreation and tourism activities in that region. A major adjustment is needed for the so-called "Alyeska effect," which refers to the large number of oil spill cleanup workers who were housed in bed-tax-paying quarters during the early 1990s. Using estimates of this effect from Valdez officials, we adjusted the data. The resulting series is flat or even declining (fig. 51).

Valdez cruise ship activity shows signs of a slight increase in recent years, owing mostly to larger average ship size (fig. 52). Valdez is a regular port of call for smaller (about 500 passenger) ships, and hosts larger vessels only on an irregular schedule.

Whittier: rail shuttle passengers and day cruise tourists—Almost all visitors to Whittier ride the railroad shuttle as there is currently no road access. Passenger arrivals in Whittier by rail have been relatively steady. Figure 53 shows the total volume of one-way passages. Because some people continue on the ferry, the actual number of visitors to Whittier is slightly more than half of this total one-way volume.

Whittier has a combination of head and sales taxes designed to tap visitor flows through its harbor. For 1997, a harbor impact fee of $1 per person exiting the harbor shows that about 50,000 people participated in day cruises and charter activity. According to fee data (Grande 1999) as an indicator of passenger counts, the total number of people engaged in these activities actually declined slightly between fiscal years 1996 and 1999 (years ended June 30).

In spite of this decline, the Prince William Sound glacier tour day cruise capacity operating out of Whittier has recently increased from one company with capacity of about 315 people per day, to two companies with combined capacity of about 500 people per day (Beck, n.d.). Interviews confirm that this growth in capacity anticipates the passenger influx from the Whittier road.

Sport fishing participation data—The Alaska Department of Fish and Game (ADFG) produces high-quality survey data on participation, catch, and harvest by sport anglers at specific fishing sites (ADFG 1993, 1998).

The south-central region generates about two-thirds (70 percent) of the total angler days in Alaska. The Kenai River alone generates about one-third (30 percent) of total angler days in Alaska. Sport fishing in south-central Alaska has declined by about 5 percent (total decline, not average annual) between 1995 and 1997. This decline is mirrored on the Kenai River, where angler days have declined from 1.0 to 0.95 million. Recent news reports confirm that total sales of Alaska resident fishing licenses declined from 1997 to 1998 (Anchorage Daily News 1999).

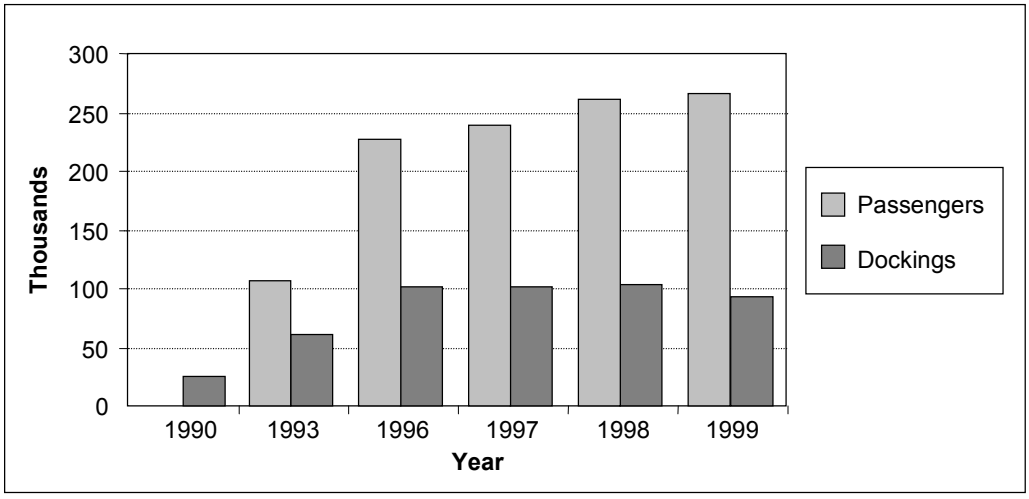

Figure 50—Seward cruise ship activity. Note: 1990 passenger counts not available.

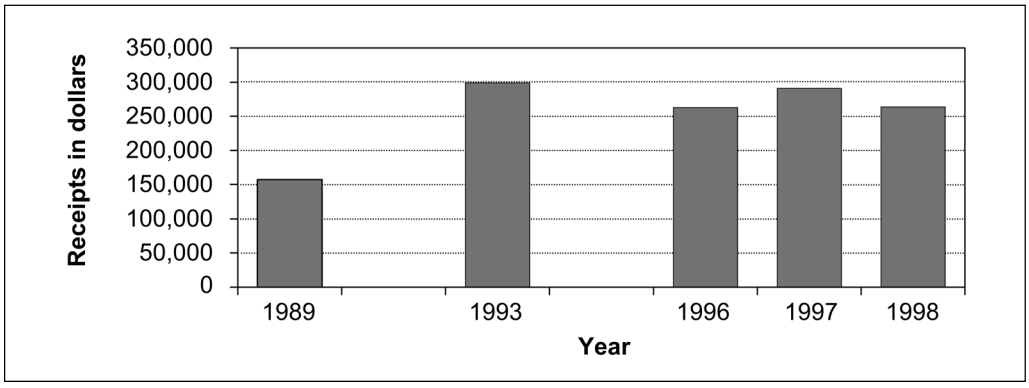

Figure 51—Valdez bed tax receipts.

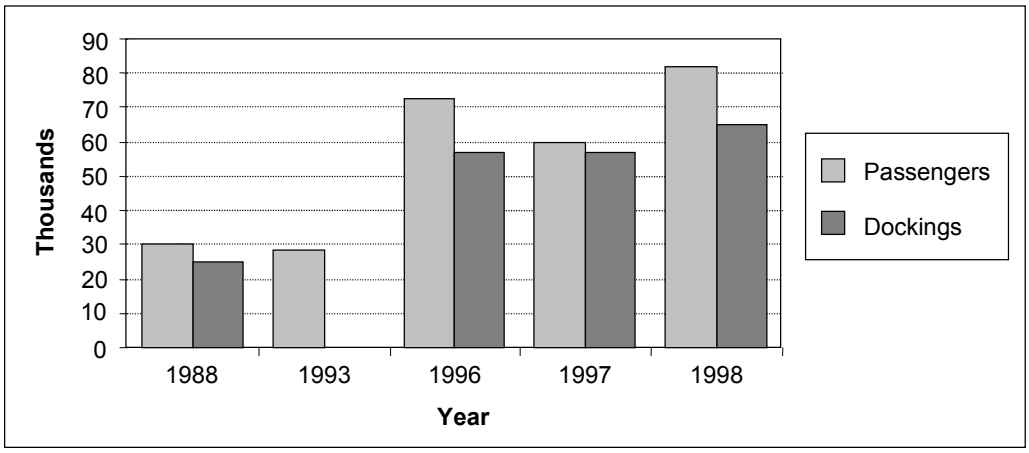

Figure 52—Valdez cruise ship activity. Note: 1993 data on dockings not available.

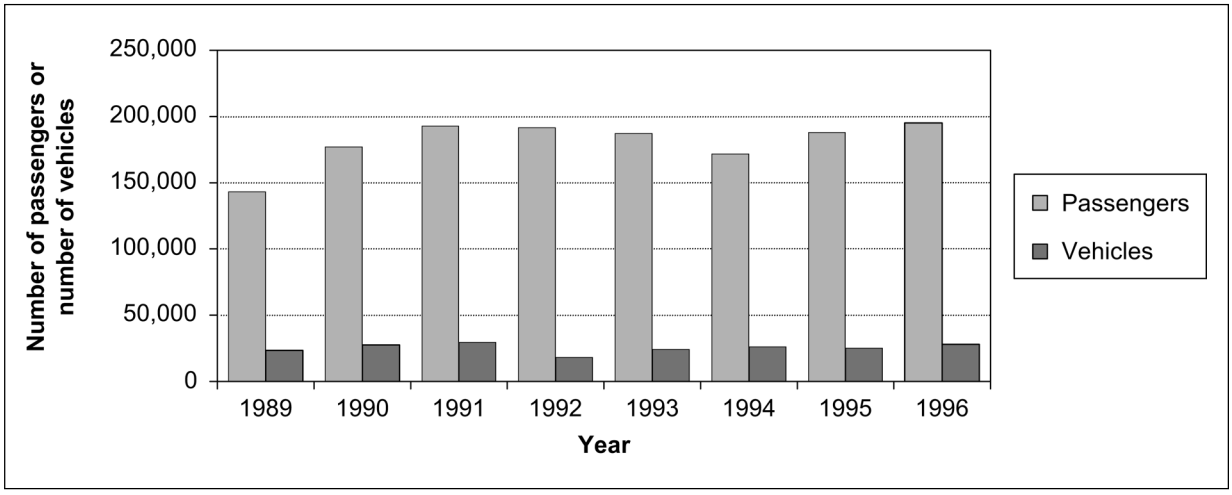

Figure 53—Whittier railroad shuttle activity (excludes large groups in vehicles).

As table 15 shows, the composition of the angler population fishing in south-central Alaska is shifting toward nonresidents. In 1992, it was 62 percent Alaska residents and 38 percent nonresidents, whereas in 1997, it was 53 percent residents and 47 percent nonresidents. Alaska resident fishing in south-central Alaska declined at 2.6 percent per year between 1992 and 1997, whereas nonresident fishing increased by 3 percent per year.

Business license data—Business license data provide excellent geographic specificity but cannot easily reveal changes in the size distribution of firms and fail to capture business activity if the owner lives far from the actual place of business. We are restricted to using two-digit standard industrial classification (SIC) codes to identify tourism-related industries (see notes in app. 1 for more discussion). The most revealing two-digit sectors appear to be:

- Eating and drinking places (SIC 58)
  - Eating (about 83 percent of total SIC 58 establishments)
  - Drinking (about 17 percent)
- Hotels and other lodging places (SIC 70)
  - Hotels and motels (about 45 percent)
  - Rooming and boarding houses (about 30 percent)
  - Camps and RV parks (about 25 percent)
- Amusement and recreation (SIC 79)
  - Entertainers (about 13 percent)
  - Fitness centers, golf courses, bowling centers, and dance studios (about 11 percent)
  - Miscellaneous amusement and recreation (about 76 percent)—the raw data show that nearly all businesses in this category are guides, charters, or outfitters.

Growth in number of business licenses—Generally, the business license data show two things:

- Overall statewide stagnation in the number of businesses within many of the categories.
- Rapid business growth in certain areas and places, such as the Chugach National Forest region overall, or hotels and motels in Seward.

Table 16 shows tourism-related business license growth during the past 5 years by comparing 1998 levels with 1993 levels.[4]

[4] Because the business license files are expensive to acquire and cumbersome to work with, we have used the two benchmark years 1993 and 1998. We believe there is little to be gained from looking at annual data from the intervening years.

Table 15—Sport fishing participation and effort: 1992 vs. 1997

	1992		1997		Average annual growth
	Number	*Percent*	*Number*	*Percent*	*Percent*
Anglers:					
Statewide—	428,768		477,880		2.2
Resident	246,108	57	233,920	49	-1.0
Nonresident	182,660	43	243,960	51	6.0
South-central Alaska—	319,350		333,748		.9
Resident	198,034	62	177,227	53	-2.2
Nonresident	121,316	38	156,521	47	5.2
South-central share of statewide total		74		70	
Angler days:					
Statewide—	2,540,374		2,654,454		.9
Resident	1,768,392	70	1,705,878	64	-.7
Nonresident	771,982	30	948,576	36	4.2
South-central Alaska—	1,889,930		1,877,974		-.1
Resident	1,364,454	72	1,194,087	64	-2.6
Nonresident	525,476	28	609,477	32	3.0
Specific areas:					
South-central Alaska	1,889,930	74	1,877,974	71	
Kenai Peninsula	945,272	37	955,499	36	
Prince William Sound	113,443	4	130,290	5	

The Chugach National Forest region includes all towns and cities located within or adjacent to the Chugach National Forest (see app. 1 for more discussion of geographic definitions).

Table 17 highlights the faster growth rates of net new tourism-related businesses in the Chugach National Forest region,[5] relative to other regions, among all types of business ownership. Business licenses grew by almost 6 percent per year in the Chugach National Forest region, compared to zero growth in south-central Alaska and only 2.5 percent growth for all of Alaska. Significantly, the same type of vigorous growth also occurred in the Denali National Park region.

Finally, table 18 shows how the overall growth in business licenses is driven by lodging and transportation services. These businesses have grown rapidly in the Chugach National Forest region and more rapidly than in most other places within south-central Alaska. For example, the number of hotels and other lodging within the Chugach National Forest region has grown from 88 to 222 establishments, during the past 10 years. Amusement and recreation establishments grew at an annual rate of 7 percent in the forest region compared to a decline in Anchorage and little change overall in south-central Alaska.

[5] We divided Alaska into regions based on ZIP Code. The regions begin with the forest (all towns and cities located within or adjacent to the Chugach National Forest) and extend outward to the rest of the state. The forest region comprises Cooper Landing, Cordova, Girdwood, Hope, Moose Pass, Seward, Tatitlek, Valdez, and Whittier (see app. 1 for a complete listing of the regions).

Table 16—Tourism-related Alaska business licenses by region and ownership class, 1993 and 1998

Region	Corporation		Partnership		Sole proprietor		Total	
	1993	1998	1993	1998	1993	1998	1993	1998
Chugach National Forest	57	98	126	154	257	328	440	580
Kenai	113	175	259	306	705	734	1,077	1,215
Anchorage	719	800	630	539	1,957	1,644	3,306	2,983
Mat-Su	88	122	192	203	456	464	736	789
Other south-central Alaska	16	19	32	33	66	61	114	113
Total south-central Alaska	993	1,214	1,239	1,235	3,441	3,231	5,673	5,680
Denali	13	27	29	33	44	56	86	116
Fairbanks	185	237	221	187	731	555	1,137	979
Other	480	590	591	779	1,608	1,662	2,679	3,031
Outside Alaska	189	228	30	54	109	140	328	422
Total Alaska	1,860	2,296	2,110	2,288	5,933	5,644	9,903	10,228

Note: Chugach National Forest region includes all towns and cities located within or adjacent to the Chugach National Forest. See appendix 1 for more discussion of geographic definitions.

Table 17—Average annual Alaska business license growth from 1993 to 1998 for tourism-related industries

Location of owner	Corporation	Partnership	Sole proprietor	Total
		Percent		
Chugach National Forest	11.4	4.1	5.0	5.7
Kenai	9.1	3.4	.8	2.4
Anchorage	2.2	-3.1	-3.4	-2.0
Mat-Su	6.8	1.1	.3	1.4
Other south-central Alaska	3.5	.6	-1.6	-.2
Total, south-central Alaska	4.1	-.1	-1.3	0
Denali	15.7	2.6	4.9	6.2
Fairbanks	5.1	-3.3	-5.4	-2.9
Rest of Alaska	4.2	5.7	.7	2.5
Outside Alaska	3.8	12.5	5.1	5.2
Total, all licenses	4.3	1.6	-1.0	.6

Table 18—Tourism-related business licenses by region and subsector

Region and subsector	1989	1993	Average annual growth, 1989–93	1998	Average annual growth, 1993–98	Average annual growth, 1989–98
	- - *Number* - -		*Percent*	*Number*	- - - *Percent* - - -	
Chugach National Forest:						
Local and interurban passenger transit	20	23	3.6	13	-10.8	-4.7
Transportation by air	18	17	-1.4	12	-6.7	-4.4
Transportation services	15	18	4.7	38	16.1	10.9
Eating and drinking places	100	79	-5.7	87	1.9	-1.5
Hotels and other lodging places	88	153	14.8	222	7.7	10.8
Auto repair, services and parking	42	35	-4.5	43	4.2	.3
Amusement and recreation	92	115	5.7	167	7.7	6.8
Total forest	375	440	4.1	582	5.8	5.0
Kenai:						
Local and interurban passenger transit	26	17	-10.1	25	8.0	-.4
Transportation by air	58	58	0	57	-.3	-.2
Transportation services	24	27	3.0	42	9.2	6.4
Eating and drinking places	162	161	-.2	155	-.8	-.5
Hotels and other lodging places	139	219	12.0	330	8.5	10.1
Auto repair, services and parking	176	135	-6.4	106	-4.7	-5.5
Amusement and recreation	400	460	3.6	501	1.7	2.5
Total Kenai Peninsula	985	1,077	2.3	1,216	2.5	2.4
Anchorage:						
Local and interurban passenger transit	63	50	-5.6	39	-4.8	-5.2
Transportation by air	279	208	-7.1	185	-2.3	-4.5
Transportation services	262	238	-2.4	244	.5	-.8
Eating and drinking places	741	644	-3.4	613	-1.0	-2.1
Hotels and other lodging places	363	442	5.0	514	3.1	3.9
Auto repair, services and parking	990	770	-6.1	493	-8.5	-7.5
Amusement and recreation	1,059	955	-2.6	922	-.7	-1.5
Total Anchorage	3,757	3,307	-3.1	3,010	-1.9	-2.4
Mat-Su:						
Local and interurban passenger transit	8	7	-3.3	13	13.2	5.5
Transportation by air	81	59	-7.6	59	0	-3.5
Transportation services	25	31	5.5	36	3.0	4.1
Eating and drinking places	135	102	-6.8	148	7.7	1.0
Hotels and other lodging places	120	150	5.7	167	2.2	3.7
Auto repair, services and parking	196	133	-9.2	125	-1.2	-4.9
Amusement and recreation	221	254	3.5	250	-.3	1.4
Total Mat-Su Borough	786	736	-1.6	798	1.6	.2

Table 18—Tourism-related business licenses by region and subsector (continued)

Region and subsector	1989	1993	Average annual growth, 1989–93	1998	Average annual growth, 1993–98	Average annual growth, 1989–98
	- - Number - -		*Percent*	*Number*	*- - - Percent - - -*	
Other south-central Alaska:						
Local and interurban passenger transit	4	2	-15.9	2	0	-7.4
Transportation by air	10	10	0	11	1.9	1.1
Transportation services	3	5	13.6	4	-4.4	3.2
Eating and drinking places	15	12	-5.4	10	-3.6	-4.4
Hotels and other lodging places	38	38	0	43	2.5	1.4
Auto repair, services and parking	13	12	-2.0	12	0	-.9
Amusement and recreation	43	36	-4.3	31	-2.9	-3.6
Total other south-central Alaska	126	115	-2.3	113	-0.4	-1.2
Total south-central Alaska:						
Local and interurban passenger transit	121	99	-4.9	92	-1.5	-3.0
Transportation by air	446	352	-5.7	324	-1.6	-3.5
Transportation services	329	319	-.8	364	2.7	1.1
Eating and drinking places	1,153	998	-3.5	1,013	.3	-1.4
Hotels and other lodging places	748	1,002	7.6	1,276	5.0	6.1
Auto repair, services and parking	1,417	1,085	-6.5	779	-6.4	-6.4
Amusement and recreation	1,815	1,820	.1	1,871	.6	.3
Total south-central Alaska	6,029	5,675	-1.5	5,719	.2	-.6

Implications of business formation patterns—These data are consistent with the rapid broadening and deepening of the service sectors that support recreation and tourism in the forest region. They provide a consistent and reliable signal that small entrepreneurs are responding to the opportunities offered by the combination of the large Anchorage market and increased numbers of nonresident Visitors.

Many small businesspeople we interviewed suggested that Forest Service permit requirements are too onerous and, therefore, a "black market" for on-forest recreation services may be developing. Whether or not this is true, the evidence seems clear that many relatively new entrepreneurs are operating near the forest.

Other Special Studies

Several special studies, prepared for specific projects or places, have produced data or analyses that are potentially useful for this recreation and tourism assessment. We reviewed several of these studies and, in this section, we briefly discuss two reports that deal directly with demand growth in the Prince William Sound area.

Prince William Sound transportation plan: tourist traffic assessment—Beck's (n.d.) "moderate case" projects overall visitor (residents plus Visitors) demand within the Prince William Sound planning area[6] to grow from the current level of 800,000 visits to 1.9 million within

[6] An area defined by the Alaska Department of Transportation and Public Facilities to include Whittier, Valdez, Seward, Cordova, Tatitlek, Chenega, and the transportation corridors linking these places.

10 years. Most of the growth occurs through Whittier in response to the road. This analysis does not develop a rationale for this demand growth. The numbers appear to be taken from previous studies related to the Whittier road.

Whittier access project studies—Several special studies relating to transportation and travel to Whittier have been conducted as part of the environmental impact statement (EIS) process for the Whittier road. Of greatest relevance to this assessment are the analyses by Northern Economics (1993, 1995) in which projected growth in traffic to Whittier is presented. These projections are based on direct surveys of travelers conducted in the immediate area during 1993. The surveys were used to generate demand curves that relate potential trips to the toll charged for use of the new tunnel.

The projections published with the EIS show travel to Whittier jumping tenfold on completion of the road—from about 100,000 persons per year to about 1 million persons per year. This estimate, however, is based on a toll charge of about $10 per vehicle (in 1998 dollars). The estimated demand for trips is sensitive to the toll charged for toll rates above about $20. For example, if the per-vehicle toll was raised to $30, the number of estimated visitors would drop by about half.

Chapter 4: Information Obtained from Interviews

Introduction

In this chapter, we report the general impressions gained from more than 100 open-ended interviews. We used an opportunity sample approach and our interviews in no way constitute a survey. Our interviews focused on three types of informants: small operators providing generally nonmotorized or "self-propelled" experiences, people in communities near the Chugach National Forest, and operators of medium and large tourism enterprises. We present the information provided to us without passing analytical judgment on the validity of specific statements or views. Note that we are reporting what others told us and not our own views.

Small Operators and Adventure Providers

The following is a summary of information gleaned from 36 informal interviews with key informants and operators of small adventure companies, conducted between January and June 1999. In general, these companies provide a mix of active activities during the day coupled with comfortable lodging at night. Most of the companies describe these types of experience as "soft adventure" or "ecotourism." Although efforts were made to cover the range of nonmotorized activities throughout the region and to include representative perspectives, this is not an exhaustive compilation of information. Over 150 companies offering nonmotorized recreational activities in south-central Alaska have been identified.

Growth Rates

Respondents report a generally steady increase in business over the last 10 years, with more gradual increases for some over the last 5 years. Some (mostly younger) companies have experienced large increases over the last 5 years. Some activities lend themselves to more independence and therefore less growth in commercially mediated activity. For example, cross-country skiing and hiking require less gear and expertise than sea kayaking, river rafting, and dog mushing.

In Prince William Sound, tourism and recreation activity over the last 10 years has coincided with the recovery period from the *Exxon Valdez* oil spill. Several individuals mentioned a 10- to 15-percent growth rate per year in business. Additionally, many operators have mentioned that they are beginning to cap or self-regulate their growth so that they can operate at a desired capacity or exercise a higher degree of selectivity. These operators feel that for the types of activities they provide, most of which are conducted in backcountry or primitive settings, the quality of the experience can be degraded by too many people. These indications of desires to cap growth also may be indicators of a supply-limited industry in certain locations. The fastest growth generally seems to be occurring in the combination adventure trips, where participants can sample various activities in Alaska within a limited amount of time.

Creative Links

Location—or at least proximity—is important to the small operators. The success of several of these companies lies in the unique links they have made to larger tourism operations. Some operations have been particularly successful in creating affiliations with larger packaged tourism and transportation operations because of their proximity to stopovers. For instance, Alaska Rivers Company, located near the Kenai Princess Lodge, exclusively meets the needs of lodge clients for river rafting and hiking day trips. Sunny Cove Sea Kayaking Company is linked with Kenai Fjords Tours in Seward, which makes transportation and bookings conveniently consolidated and attracts a wider audience. Across the Bay Tent and Breakfast has become a regular stop for a European company, Trek America, which uses their accommodations and recreational opportunities regularly. These creative links access "captive" customers who make up a substantial proportion of the seasonal business for these small companies.

Links to large-scale cruise tourism are especially beneficial for day trip operations. Some tension has developed for businesses trying to maintain a small-company niche while using big-company connections to stay afloat. Some older and successful companies have chosen to cap growth to preserve their small-company flavor. Local soft adventure providers are often seen by big companies as an amenity they can offer to their customers who may value local flavor and a hands-on product. Proximity to an accessible population source such as Anchorage is important for many successful day-trip operations. Being near communities is an important link as is the ability to offer multiple options internally or through external relations to draw the crowds who want a "sampler" of the Alaska experience. Winter operators have emphasized the importance of pooling resources to attract visitors for multiday packages and create a future for winter tourism in Alaska.

Some operators are catering to Alaskans by tapping the visiting-friends-and-relatives market and including Alaskans in their operations. Some trips are successfully billed as a visitor's main attraction and primary reason for visiting Alaska; these trips are a destination. Others succeed as sideshows, part of a package or an amenity added to an overall trip. This matches an increase in "breakaway" tourism where people come to Alaska on a cruise but spend part of their trip as independent travelers.

Healthy Customer Base

The customer base is not depleted; there is a general concurrence that people will keep coming to Alaska and searching out soft adventure and ecotourism. Many people mention increased competition over time for providing soft adventure experiences. This increase in supply may have broadened the nonmotorized industry, where there is great demand. Some operators are optimistic about the future, stating, for example, that "tourism has not even arrived in Alaska yet," but noting that when it does, it will need to be carefully managed and perhaps physically divided into urban-based recreation and purer wilderness experiences. The rise in independent travelers has been particularly noted in western Prince William Sound and Wrangell-St. Elias National Park. There are two distinct groups of tourists: those who visit Alaska "once and for all" and expect to see everything on their one brief visit and those who choose to visit in segments and select a different regional destination for each trip. The number of people in the latter group is increasing, yet there are many still in the former category.

Competition

Competition for clients is heavier in some areas than others. Across the region, small soft-adventure operators are concerned about out-of-state competition and loss of in-state revenues. The large cruise industry operations are resented for containing their clients and not contributing more to the local and state economies. There is concern in some areas, such as the Wrangell-St. Elias region, about preserving the flavor and importance of the local community and growing only within the desires of the community. Operators in this region in particular, pride themselves on their ability to offer the remote Alaska experience that many people expect. They are able to do this because of their proximity to large areas of public land.

The cruise industry big-package tourism is not desirable to every community, and some small businesses fear the imposition of this style of tourism. These small businesses feel that the large companies do not recognize or respect the importance of small-scale tourism to rural communities. For instance, one operator feels that the Whittier road is an example of "big tourism jamming itself down Whittier's throat." Overall, the small soft-adventure operators in any one region are competing against all the other wilderness adventure experiences offered by other operators in Alaska. This is because many visitors are making a once-in-a-lifetime trip to Alaska and will only pick one operator to provide their single "Alaskan adventure" experience. These business operators need to "work smarter, not harder" to stay ahead of their competition.

Motorized Activities

Motorized activities are seen as an increasing annoyance in some areas where people like to experience wilderness. Most providers of non-motorized activities, however, are relying on some form of motorized transportation such as boat charters, floatplanes, snowcats, or helicopters to access the wilderness. In some locations, snowmobile use is reaching levels that are incompatible with other activities. Creating more designated separate use areas to balance snowmobile impacts with quieter activities is one suggestion. Recreational use of jet skis on ocean areas and lakes has raised concern about environmental impacts, safety, and its effect on quieter activities. There is also some concern about increasing amounts of flight-seeing.

Saturation Vs. Radiation

It is becoming more difficult to "get away from it all." Not many places have been described as "saturated," yet perhaps to avoid saturation and preserve the quality of experience, groups are traveling farther in search of the wilderness experience they expect in Alaska. This is the "radiation" effect. Traveling farther out increases the time and money spent by the visitor. Although there still is room for more people in many places, there is concern about the quality of the experience. In the future, the Whittier road is expected to cause saturation and radiation in western Prince William Sound. Places that are perceived as becoming saturated include Blackstone Bay, the Kenai River, the front range of Chugach State Park (closest to Anchorage), Turnagain Pass (in winter), Hatcher Pass, and Chitistone Canyon in Wrangell-St. Elias National Park. The saturation issue as it relates to social carrying capacity, however, also reflects the perspective of the individual: as one person put it, "one person's highway is another's wilderness" and vice versa.

Stewardship Concerns

There is much concern about people failing to practice low-impact techniques in the back-country. Some concern was expressed about whether the intrinsic value of wilderness is being overlooked in seeing wilderness as a moneymaking opportunity. There was much concern about impacts of "wreckreators," independent people who lack low-impact skills and outdoor experience or who are simply careless and now have easier access to wild places and adventurous activities. For their safety and for protection of the environment, this user group might benefit from recreation education about the cumulative effects of irresponsible use on the environment.

Many people have mentioned the need for more state involvement in the area of environmental protection. One suggestion was that it would be beneficial to have a system of observers on board the bigger tour and cruise boats to ensure environmental and resource protection. Larger companies, in a way similar to the current fisheries observers, would pay for the system.[1] Some impacts will necessarily accompany any human activity; the impacts of tourism as the rising industry for Alaska's future must be balanced against other consumptive land uses

Permit System

Many people mentioned permits; some were in favor of them, whereas others feared and opposed them. Few think more permits are needed now, but possibly they may be in the future. As for commercial use permits on the national forest, as well as other adjacent public lands, many operators feel that the present government restrictions are misguided and misdirected at the small operators. Many expressed that it is difficult for small operators to work with the Forest Service, and that the short-sightedness of this system currently encourages a lot of "pirate" use, working around and not within the regulations. Some outfitters recognize that they are both part of the problem and part of the solution and see a capability for commercial operators to self-police their use of public lands. Some small operators resent

[1] The interviews for this section were conducted prior to several well-publicized cases of cruise ships dumping sewage in southeast Alaska waters. As a result, the Alaska legislature passed legislation that requires less waste discharge in nearshore areas and stricter reporting of discharges.

the present system and feel that they are penalized by being treated as "cash cows." Others felt frustrated with Forest Service management and the permit process but also felt that the Forest Service does a good job given its limited amount of staff and resources.

The Appeal of Soft Adventure

The strong and rising appeal of so-called soft adventure has been widely noted. Soft-adventure activities now appeal to a broader base of clients and consumers than 10 years ago. There has been a rise in groups planning soft-adventure trips such as a honeymoon or reunion of friends. (Couples seem to outnumber families visiting Alaska.) These kinds of activities are what people tend to expect from Alaska. Soft adventure provides wilderness experiences without the need to "rough it," yet people are more adventurous now than they were 10 years ago in that most are willing and eager to try something new.

The growth in ecotourism and soft adventure has been one of the greatest forces in tourism in the last 20 years. Trip length has decreased at the same time the demand for trips of this nature has grown. The user group has changed; people now have limited time for their Alaska vacation and wish to do more with less time invested. There is a desire to "touch everything" but not be immersed for too long in any one activity or place. Adventure is appealing and glitzy, and there are more outdoor novices seeking an entertaining outdoor experience, rather than seeking outdoor education to learn how to do it themselves. People bring expectations of activity and entertainment and rely on guide services for safety—there is a general realization that "you don't have to try too hard to get yourself snuffed out in Alaska." Shorter trips in particular attract people who lack wilderness skills but merely want a taste of the wilderness experience.

Soft-adventure activities experience popularity phases. Five or 6 years ago, rafting was really popular, whereas over the last 5 years, sea kayaking has been increasing substantially in popularity. Before long, however, many operators expect sea kayaking to plateau and to be surpassed in popularity by a different activity, although they do not expect a decline. In an historical context, more people want to do less consumptive activities. For instance, more people are coming to watch bears rather than to hunt them, and many activities besides fishing are popular. Success for a travel adventure company depends on avoiding the crowds. Soft-adventure activities used to be only small scale and were considered risky business ventures; now these activities are more mainstream and are what people expect. Future growth is predicted in adventure sports as a primary purpose for a vacation.

Expectations and Impressions

People come on nonmotorized trips expecting to see lots of wildlife and incredible scenery. Small operators try to dispel the mass-marketing myths of "wildlife-everywhere-you-look," but people still come to the experience misinformed. Many people attribute the mistaken impressions to the cruise line marketing and large-scale media, which emphasizes closeup and abundant wildlife encounters. Another common expectation is that Alaska is pure wilderness with no crowds. Despite all the misconceptions, the scenery consistently exceeds customers' expectations and, overall, they come away from their adventure trip satisfied and awed by Alaska's grandeur.

Perceived Connections to the Alaska Economy

Tourism is a major contributor to Alaska's economy, but ecotourism-soft adventure is not generally recognized as a monetary contributor relative to its importance within the industry. Some disappointment has been expressed for declining state support of soft adventure with marketing funds. There is a contrast here: people think "tourism equals cruise ships," but many of the people on those ships expect the wilderness experiences of Alaska, which ecotourism and soft adventure activities provide. The importance of the "visiting friends and relatives" market is crucial to many smaller operations, and the independent travelers are a significant portion of soft adventurers.

The Internet as a Marketing Tool

Nearly everyone indicates that the Internet is their most successful marketing resource and has aided their business. Internet marketing is time-efficient for both the consumer who is shopping around and for the operators, who save time on administrative tasks (making reservations, providing information, preparing customers, and shaping expectations). The Internet is particularly effective at serving the important independent traveler market. One concern expressed is that everyone appears to be equal on the Internet; this may level the playing field for new companies or smaller operations. However, it dilutes the important qualifications of experience and longevity.

Many small operations are short-lived. In several locations, there is a new soft-adventure business every year or so that quickly folds and is replaced by another. Lots of people are attracted to the summer energy, decide to try it themselves, and then sell out. There is speculation that this high turnover is due to the realization of how hard they must work year-round to make a living in soft-adventure operations.

Although everyone recognizes the importance and value of public lands, few people are knowledgeable about which agencies manage different land areas, let alone differences in how they are directed to manage the land. These distinctions are blurred into one vision of "public lands." This is true of most operators, and certainly most of the users, both Alaskans and visitors.

Although small operators are generally happy to join the big bandwagon of soft adventure, each operator also pushes his or her own applecart. That is, every operator tends to have a cause that is particularly emotional, contentious, or bothersome for him or her, whether it be permits, outside operators, their trade association, or a particular place they see as crowded or environmentally degraded or threatened. This diversity of opinions further illustrates the various niches small operators occupy.

Current and Future Challenges

A significant perceived challenge is preserving the diversity of operators. Many people predict a trend of fewer and bigger businesses swallowing up many small operations. A challenge to the working arrangements between operators is that the package size does not always fit: a "lodge-load" is several busloads, which do not equal a "raftload." Quality may be compromised by condensing the product. As one person put it, "If you take a tuna steak, and process and package it repeatedly, you end up with only tuna fish salad!" The moral is, the big fish need to respect the identity and character of the smaller fry, and then maybe they can swim together. Other predictions include less fly-by-night, quick-to-fold operations, but fewer opportunities for small operations.

The presence of bigger operations changes the experience for smaller companies—groups may need a division of use areas to preserve the small group character and separate activities, both on the water and on the land. A particular winter challenge is avoiding snow machines in the backcountry; this seems to be increasingly difficult for all other activities, from cross-country skiing to dog sledding to heliskiing. Many operations are seeking to develop year-round activities to sustain their business. There is a lot of concern about the effects of beetle kill in the forests on the Kenai and its impact on tourism. Many anticipate the scenic quality of the forests to deteriorate and expressed safety concerns related to additional hazards in rivers and fire. Some operators foresee a future clash and widening rift between environmental organizations and recreation outfitters. Traditionally, these groups have been close allies, but with the increasing popularity of outdoor recreation and shifting of public lands away from more consumptive uses, environmental groups may have fewer "traditional" battles to fight and may therefore focus more on tourism as a cause of environmental impacts.

There is concern about the impacts of the Whittier road on western Prince William Sound. Some are concerned the access offered by the road will entice cruise ships to return to Whittier

and the Sound, which could diminish the visual quality of the wilderness experience and increase air pollution. There is much opposition to the idea of businesses being located on the water, such as floating lodges. For that matter, many people expressed the general sentiment that public lands and areas are not the place for development. People come to Alaska seeking wildness, not development, and something different from the "lower 48." Land managers, therefore, should keep development and human impacts from heavy use confined to present corridors and not develop new places. Some people support more corridor development along the present road system. These corridors are important jumping off points for wilderness experiences. One thought is to control access at present locations; the other is to dilute the crowds by providing more access to more places. Most people favor the former approach.

Many small operators see promise in marketing through alternative channels such as magazines that cater to a certain activity, or films made in Alaska locations. There is a general sentiment that the small operations have been neglected in state tourism marketing plans. The consensus seems to be that tourism is the way of the future, and if it is going to be Alaska's bright star, proactive planning and environmental protection are needed. For tourism to realize its potential, there must be large areas of pristine public lands to meet visitor expectations and demands, as well as access to these lands for nonmotorized business operators.

Community-Based Interviews

This section contains a summary of information from interviews with about 50 individuals from the communities of Seward, Moose Pass, Cooper Landing, Hope, Cordova, Chitina (the Copper River Valley), Whittier, Valdez, Anchorage, and McCarthy/Kennicott during June and July 1999. Within each community, efforts were made to gather a range of perspectives by speaking with a broad cross section of local residents, long-time observers, and recreation and tourism industry participants, including businesspeople, public officials, and agency staff based in the communities.

Descriptions of Communities and Key Attitudes and Perceptions

Seward—This major cruise ship port in south-central Alaska is a popular destination for independent travelers, Anchorage residents, and their visiting friends and relatives (commonly referred to as VFR travelers).

Key attitude: The more visitors the merrier. We have lots to offer!

Cooper Landing—Located near the popular Kenai and Russian Rivers sport-fishing sites, this small settlement booms with activity during the summer fishing season.

Key attitude: We wish people wanted to do more here than fish, but we're not sure how to snag them or lure them away from the rivers.

Moose Pass—A quiet wayside community close to the heart of the Chugach National Forest trail network.

Key attitude: Tourism is speeding past us and not stopping—we don't necessarily care if they don't want to stop, but don't drive so fast.

Hope—Founded as a mining community, this tiny hamlet at the end of a 16-mile spur road is increasingly popular for its historical resources and its appeal to curious independent travelers.

Key attitude: We care very little about tourism, but bring on those who really want to come here on our terms. We're a real town and we're going to stay that way. We'll never be a Disneyland destination.

Cordova— Still a working town based on commercial fishing, but also an important access point to the scenic beauty of remote eastern Prince William Sound.

Key attitude: The same as Hope—We could almost care less about tourism, but bring on those who really want to come here on our terms. We're a real town and we're going to stay that way. We'll never be a Disneyland destination.

McCarthy/Kennicott—Located at the end of a 60-mile dirt road, this former large-scale mining community appeals to independent travelers, Europeans, and guided small group van tours.

Key attitude: We want tourism, but we're scared about losing our character and soul. We have been here longer than the national park that surrounds us.

Valdez—Currently a minor cruise ship port with major helicopter skiing potential. Valdez also sees many "pass-through" visitors on short package tours that explore or traverse Prince William Sound.

Key attitude: We are aiming to become a real destination, especially for skiers.

Whittier—This former military terminal is the gateway from Anchorage to Prince William Sound and is poised for rapid growth stemming from road access.

Key attitude: We're eagerly awaiting the new road and all that it may bring.

Summary of Comments and Concerns

In general, there is much concern across communities about the impacts of future access improvements. Some people desire these improvements, yet many residents of small communities do not. There is much concern about the impacts associated with access and radiation of tourism and recreational use within western Prince William Sound due to the Whittier road. Many people in the small communities of Hope, McCarthy, Chitina, and Cordova are not excited about road access improvements that would allow a sudden influx of large numbers of tourists. They fear that their communities could change too much and too quickly. Their concerns also are based on observations that where access improvements have been made in other communities, the local infrastructure has not been strengthened to support the resulting higher volume of traffic. As a result, many communities are faced with sewage and parking problems, high speed traffic in residential areas, excess garbage from campgrounds and public restrooms, and drinking water concerns. People in Whittier are particularly anxious about dealing with infrastructure demands that will result from the new road.

One place where the direction of tourism has been successfully anticipated in order to meet demand is Cordova, with the exception of accessible camping. In Cooper Landing, the lack of desired facilities, particularly campground space, may be limiting the volume, but this relates to the type of recreational use in this particular area (sport fishing). In many of these communities, specific problems have prompted local responses that are not perceived to be coordinated with public land or road management. Community members often hold different opinions about development. In Cordova and McCarthy, there are "radicals" or "bush babes" who moved there because it is a remote, scenic place to live; they do not want to see development. On the other hand, many long-time residents want to remain and see community services grow. These people see tourism dollars as positive developments. In Hope, the situation is reversed. The transplants tend to see tourism opportunities as a way to make a living in a remote and scenic community, whereas long-time residents do not want to see the community change.

Visitor Demographics

Cruise passengers—This group is often thought of first when describing tourism in Alaska, but respondents feel that a lot more is going on out there. Passengers embark and disembark from the cruise ship at Seward, but most travelers are "contained" and do not spend any time in the community. They are bus passengers through the Kenai Peninsula and value the forest only for its scenery as they travel between Anchorage and Seward. Some add on a land tour to the Kenai Princess Lodge in Cooper Landing and do some light recreational activity within the forest. The Kenai Princess Lodge serves as a hub for soft-adventure activity, but little sport fishing is done there. The Princess cruise line is set up for transport between multinight stays at hub lodges offering choices of activities to a slightly younger, more

adventurous traveler; it is a popular option with the baby boomer generation. Holland America offers more fully packaged tours with fewer choices and generally services an older clientele. Royal Caribbean is not linked to the buses and therefore delivers "disappearing travelers" who disembark from the ship and travel independently for the rest of their stay in Alaska.

"Disappearing" and "breakaway" travelers—Disappearing and breakaway travelers are people who make a transition from being a cruise package tourist to an independent traveler within the same trip. For instance, people disembark in Seward or Cordova and "disappear into Alaska." Or, they may break away using a preplanned, rented RV. Several Anchorage flight-seeing and air taxi operators enjoy doing business with these folks but note that they are increasingly being retained within the operations of the cruise lines. For example, many of the would-be breakaways now spend their land time at the Kenai Princess Lodge or the new hotel outside Talkeetna operated by Cook Inlet Region, Incorporated.

Independent travelers—Independent travelers visit all places. These people value the Chugach National Forest for scenery and multiple activities and uses. They often travel a big loop, crossing Prince William Sound, the Kenai Peninsula, and perhaps the Copper River Valley. Travelers in RVs, in particular, follow any road systems. Independent travelers in RVs seek out campgrounds, whereas those without vehicles or with rental cars stay in bed and breakfast inns and hotels, as well as campgrounds. There are significant numbers of RV travelers, both Alaskans and Visitors, who will travel a road if there is one. They may be hardest to account for because they can and do travel in such a self-contained fashion. The number of full-time RV dwellers seems to have increased during the 1990s; one campground host estimated that about 15 to 20 percent of RV tourists are in this category.

Many people now divide their trips to Alaska into several trips to specific regions. These trips are typically 1 week long. The Chugach National Forest is visited on the "south-central trip." Some people choose trip routes and destinations that are either water or land based; other people like to mix both into the same trip. Lots of independent travel is weekend traffic from Anchorage on the Kenai Peninsula. This is a noticeable trend especially in the last 5 years, and it is generally Alaskans traveling with or without their visiting friends and relatives. In addition, it was widely noted that nonresidents are coming back to explore parts of Alaska after making an initial visit on a packaged tour (see below).

The RV-independent traveler traffic appears to be equally heavy throughout south-central Alaska; it is just overshadowed in some places by the presence of the cruise industry. Even Seward relies heavily on the independent traveler market. For instance, one operator of day boat trips serves all the cruise travelers electing that option, but the cruise business accounts for only 11 percent of his total business, while most customers are visiting friends and relatives and independent travelers. The independent travel services rely heavily on word-of-mouth referrals and an Internet presence. The independent traveler is a large market, and as proof, there are many bed and breakfast inns and campgrounds filled to capacity.

Van groups—Many of the communities that are "off the beaten path" are also increasingly sought out by small tour packages traveling in 15-passenger vans. These groups provide important business to some communities, such as lodging in McCarthy/Kennicott, but in other areas, they are a mystery or even resented because they have no connections to the community. In Cordova, Hope, and Chitina, they simply pass through the town, or stop briefly to unload their passengers on a river, or to see the sights and then continue on. The guides and drivers of these groups try to keep them contained as much as possible because they are often on a tight schedule. Some of the groups are exclusively road-based and stay in lodges every night; others are soft-adventure trips that venture into the back-country for a portion of the trip and are built around recreational activities such as cycling or river rafting and involve camping. Many of the road-based trips cater to European travelers. Some communities see these

travelers as a potentially important contribution to local tourism if business connections can be established.

Other visitor characteristics—Currently, few families with young children or teenagers seem to visit Alaska—most likely due to travel expenses. Tourists in Alaska are still primarily retirees. There seems to be a trend, however, toward family groups as incomes rise and more younger people make return trips.

According to some observers, Europeans are less likely than Americans to reserve ahead. But generalizations are dangerous; at least one major air taxi operator sells much of his business through European brokers to well-organized German groups who prepay months in advance. Americans seem to take the high-speed tour, "packing it in," whether on a packaged tour or not. The European visitors tend to linger a bit longer, camp out a lot, and do not plan as far ahead. Most European tourists are German speaking.

Packages and Communities as Packages

Traditionally there has been a market for highly packaged tourism in Alaska—completely planned, contained trips that provide a glimpse of Alaska through a window. These are once-in-a-lifetime trips, usually end-of-a-lifetime trips. The cruise industry is changing to accommodate the newer market of people who want to see and do it all on one packaged trip but desire more options for activities in different locations. These travelers include elderly people and newly wed couples. Still newer are the "breakaway" cruise travelers, who participate in a package for a portion of the trip and then become RV travelers for the remainder of the same trip; these are not necessarily the same as "disappearing" travelers as the RV may be a planned portion of their package. Others are using the Alaska cruise package as a way to "shop around" and see how safe and easy it is to get around, and to select locations they plan to return to on a later trip as independent travelers.

Some communities are attempting to market themselves as self-contained packages. These places market various options and services within one brochure to draw visitors to them as a potential "hub" type of destination. The Copper River Valley, Seward, and McCarthy/Kennicott have such brochures, and other communities have put out a brochure advertising the individual town. More remote communities see the Internet as an important venue for advertising and providing information with one community Web site and links to individual businesses. Having a particular attraction, such as the SeaLife Center in Seward, or the Kennicott Copper Mine, significantly augments the potential of a community to serve as a hub for independent travelers.

It is interesting to note that although the community-based interviews included a broader spectrum of people beyond small tourism operators, this wider group echoed two important themes that the small operators expressed above. First, there is much concern about marketing and the images that shape visitor expectations. In nearly every community, someone mentioned the "Disneyland" experience in Alaska with resentment; it was usually in reference to quick stops on large cruise ship tours. Skagway is seen as the quintessential "Disneyland" stop. South-central Alaskan communities pride themselves on authenticity and do not want that volume of traffic nor the image that the "community has lost its soul."

Second, there is a broad agreement in the communities that national and worldwide desires for soft adventure, ecotourism, and controlled risk are important to Alaska. There has been a rise in nonconsumptive use of wildlife and land across the region. People used to come to these communities to "kill things and take them away." Many more people come now to look around, touch the land, and leave with photographs.

Accessibility

The Chugach National Forest seems to be accessed most often by roads, rivers, and trails, in that order. The highest recreational use of the forest lands seems to be road-based campground use and back-country cabin rentals. Tourists want certain facilities yet do not want the scenery altered—they expect large areas of wilderness

that support abundant wildlife and fisheries. They always leave their visit to this region awed by the scenic beauty of the landscape; even if they do not see the wildlife that they expected to see.

One example of unwillingness to alter the landscape is the resentment toward the Copper River trail idea;[2] the consensus seems to be that the river is the most appropriate way to travel through the area and a land trail paralleling the river would detract from the river experience. There is, however, significant need for bike paths through small communities for resident use, and these would probably be an asset for visitors too. There is much interest in a tourist bike path in a more accessible place, such as paralleling the Seward Highway. Perhaps the small amount of current bike trail use is related to the hub phenomenon; the people more likely to use the trails are those staying multiple nights in one destination, not those who are quickly passing through on a day trip. Yet the trailheads are located out of town, so these people do not often get there for any significant amount of time. More trails linking the back-country to the front-country would probably increase forest use, as would more developed trails such as bike paths. One question expressed by some is how much of the higher foot traffic would radiate into back-country areas and what impacts might result?

Outlook for the Future

Most people predict slow, steady growth in tourism. Many predict that the baby boomers will continue to visit Alaska and demand more choices in the places they visit and select destinations that offer a variety of activities. There are still many available niches for small operator-entrepreneurs, especially when coupled with the growing trend in people seeking soft-adventure vacations. The Forest Service may need to make more special use permits available or easier to obtain to accommodate this growth. It also may need to provide additional trail and campground facilities on the Kenai Peninsula, where such facilities will be accessible to these travelers.

[2] The Knowles administration has proposed a non-motorized trail connecting Cordova with Chitina, following the abandoned roadbed of the former Copper River and Northwestern Railroad.

Tourism Industry Participants

We conducted several interviews with tourism industry participants, including senior executives from Alaska's two largest cruise lines.

The Demand Side: Prospects for Growth

Overall, most small to medium-sized operators feel strongly that their business decisions are driven by actual—as opposed to anticipated—demand. For example, one major helicopter operator stressed the high fixed costs inherent in helicopter operations and stated that new ventures such as helicopter hiking are not possible until a minimum efficient scale of operation can be supported. Because transportation capital such as boats and aircraft is essentially mobile, it is relatively easy to quickly follow demand rather than attempt to create or anticipate it.

In partial contrast to this viewpoint, however, senior cruise line executives acknowledge that their capacity deployment decisions have a major effect on who goes where by cruise ship in Alaska. The big lines make long-term deployment decisions based on an assessment of worldwide business conditions and then use sophisticated pricing to achieve short-term capacity utilization. Their capital is fixed as to its function but highly mobile; the goal is to put the ships where they can earn the highest possible return. In the long run, these rates of return are dependent on demand growth and intensity. Cruise ships are deployed where people are willing to pay for the recreation opportunities the ships can provide.

With these principles stated, the cruise line executives to whom we talked did not volunteer any firm predictions about their future plans regarding ports of call or capacity deployment. In particular, they have no immediate plans to return to Whittier as a terminus or port of call when the new road is finished. Choices about ports of call are under

continuous review in response to changing market conditions, and lead times of 2 to 3 years are required to implement the choices.

Tourism executives dealing with high volumes of nonresidents stress the fundamental economic characteristics of their industry—high fixed costs on the supply side and the highly discretionary nature of big-ticket vacations on the demand side. They generally project continuing steady growth in overall demand, with a significant growth spurt (doubling or tripling, but less than a fivefold increase) in Whittier when the road is completed.

The Supply Side: the Importance of Access

There is a clear, and longstanding,[3] consensus among industry executives that adequate access to "midcountry" public lands will be critical in order to satisfy the growing demand for soft-adventure experiences. Midcountry can be defined to involve "relatively good access, can accommodate large numbers of users, and has some facilities for interpretive activities, viewing, short hiking, and other soft adventure activities. At the same time, it does not have the look or feel of a main highway, or a semirural area—front-country" (Dow 1999).

Midcountry resources are desired by many user types because they have the potential to combine back-country wilderness qualities with proximity to transportation systems. User conflicts tend to arise when one group wishes to enjoy or maintain back-country experiences on midcountry lands, whereas others wish to promote higher volumes of use through access and management policies. Coexistence may be more possible than people might think because pleasure travelers are generally nonconsumptive users. For example, it appears that vacation travelers at the Kenai Princess Lodge are able to share the Kenai River with both sport and commercial fishermen.

Actual or proposed improvements to physical access are likely to provoke actual or perceived user conflicts, which in turn are likely to generate demands for restrictive management. Thus, the development of access for tourism industry growth has an important political and management dimension that goes beyond securing funding and building physical infrastructure. Effective management structures must be constructed along with physical structures.

Outlook for the Future

Overall levels of summer recreation and tourism activities in south-central Alaska will grow at about the same rate as they have during the past 5 years. Demand growth from nonresidents is linked to income, and supply constraints in the form of access restrictions could limit growth. Resident recreational use will grow with population. Notwithstanding possible high growth rates, which are often observed when the measurement base is small, the level of winter demand will remain low, and winter activities will continue to occupy a niche market.

The impact of the Whittier road will depend on how the road is managed as well as how Whittier and other landowners and managers respond to the increased travel. The road will initially attract Alaska residents and will divert people from Seward, Homer, and other communities.

Because of its proximity to both Anchorage and the Gulf of Alaska, the Kenai Peninsula will see the fastest growth in demand, and much of the increased demand will be for soft-adventure activities. The Chugach National Forest is the largest piece of public land on the Kenai Peninsula and has an important role to play in ensuring the health of the industry. However, the forest is regarded as only one of several natural areas that support the industry; the industry participants we interviewed ranked forest resources as "somewhat important" rather than "very" or "critically important."

[3] See, for example, the *Destination: Alaska* reports produced by the Alaska Visitors' Association during the mid-1990s.

Chapter 5: Conclusions

Past and Current Trends

Evidence suggest that the growth in total numbers of participants in recreation and tourism has slowed from its double-digit spurt during the early 1990s and has actually stopped in some places. Overall summer visitor arrivals to Alaska in 1998 were up only 1.3 percent from 1997. Air arrivals were down about 1.5 percent. Our estimates of south-central Alaska arrivals also show a decline of 1 percent. In Seward, total cruise ship passengers declined by 9 percent from 1997 to 1998 levels even as the number of dockings increased. In Valdez, total bed tax receipts dropped 10 percent from 1997 to 1998. In Whittier, railroad shuttle passenger arrivals are flat, and head counts measured by harbor taxes have declined by about 4 percent between 1996 and 1998.

Among recreation and tourism activities, "soft-adventure" experiences are booming. We use quotation marks around this term to emphasize that this term may mean different things to different people. Some operators have emphasized the adventure; others its "soft"ness. Rising incomes have allowed restless baby boomers to indulge their desire for "hands-on" recreation activities by purchasing what economists call "experience goods." A growing number of entrepreneurs produce these goods throughout south-central Alaska by combining highly specialized capital equipment—ranging from helicopters to whitewater rafts to dog teams—with their own often-unique expertise.

The special use permit data, the beach data, and many interviews confirm that activities such as whitewater rafting, guided kayaking, guided hiking, snow machine tours, and helicopter skiing have grown rapidly on the Chugach National Forest during the past 5 years. These activities do not seem to be subject to the overall growth slowdown noted above. It is unlikely, however, that the extremely high growth rates recorded for some activities, such as whitewater rafting, will persist for more than a few years. These growth rates are high partly because of the small base from which growth is measured.

Winter activities also seem to be increasing rapidly throughout south-central Alaska, although there is little systematic data, beyond personal observations and traffic counts, to support this conclusion. Improvements in snow machine technology allow for more reliable and user-friendly operation. These qualities have allowed entrepreneurs to offer guided snow machine tours to neophyte users. Alaska residents are driving the growth in winter activities.

Interviews and business license data show a vibrant entrepreneurial response to new recreation and tourism opportunities from businesses near the Chugach National Forest. Between 1993 and 1998, the number of business licenses for tourism-related enterprises grew by almost 6 percent per year in the Chugach National Forest region, compared to zero growth in south-central Alaska and only 0.6-percent growth for all of Alaska. Certain key subsectors grew faster. Significantly, the same type of vigorous growth also occurred in the Denali National Park region.

Several factors account for the increase in commercially mediated (as opposed to independent or "self-produced") recreation and tourism activity. First and probably foremost, consumers have more income to spend on their experience. Second, many of the popular activities require specialized equipment, ranging from helicopters to dog teams. Third, economic theory reminds us that higher incomes mean time is increasingly scarce; consumers may be substituting commercial products such as prearranged rafting trips for their own time.

The demand for more experience packed into the same amount of time can be seen in the booming demand for water taxis in Prince William Sound and the prevalence of 1-day excursions. Even in remote Wrangell-St. Elias National Park, only 11

percent of 1995 visitors did an overnight hike, but 16 percent went flight-seeing to view the same terrain (Littlejohn 1996).

As the baby boomers age, income grows, and the opportunity cost of time increases, it is likely that their internal definition of "adventure" will become ever more "soft," producing additional opportunities for commercial operators to augment or replace previously independent activities with specialized inputs such as transportation, guiding, food, and interpretive services.

Demand growth provides business opportunities, but supply side conditions shape the entrepreneurial response. On the supply side of the growing market for sharply focused, efficient adventure, our interviews clearly show the importance of the Internet in allowing small-scale and locally based operators to compete for emerging soft adventure business within increasingly narrow market niches. By using the Web, customers can create a customized package tour made up of various specialized activities. Although marketing remains a challenge, the Internet seems to be allowing more specialization as entrepreneurs trust that they can garner a critical mass of customers from the wide exposure of the Net.

At the same time, however, these small entrepreneurs depend on larger forces to attract potential customers. Interviewed industry participants commented overwhelmingly on their links with each other, high-volume operators, and communities, in making business and marketing partnerships. Seward is a city focused on bringing independent travelers and Anchorage residents down the road, now that a new generation of small operators is in place to serve them.

Although increasing numbers are branching out on snow machine tours and guided hikes, people still tend to flock to mecca attractions such as Portage Glacier, the Kenai River, the Denali Park Road, or the Kennicott Mines. The mecca concept refers to a destination sufficiently attractive that it can motivate large numbers of people to leave their home or deviate from their main route. For example, we could say that Seward is attempting to become a sort of mecca for "small-town-Alaska" enthusiasts. Some in Whittier hope that it can become the gateway to the potential mecca destination of Prince William Sound in a way that faraway Valdez has failed to do.

Currently, Seward in particular, and the Chugach National Forest in general, are bypassed by most cruise ship passengers and by many Kenai Fjords Park visitors and anglers. As we noted earlier, most of the current recreational activity on the Chugach National Forest consists of travel through corridors to get to major attractions outside the forest. "Bypass" is not meant to connote an aversion to the general area; to the contrary, it is clear from numerous data sources that viewing the scenery while passing through the Chugach National Forest is intensely rewarding to almost everyone who does it. Rather, the concept refers to physical proximity without actual "time on the ground" within the forest.

A telling example of this bypass phenomenon can be seen on the cruise ship dock in Seward. There, disembarking passengers are met by Alaska Airlines ticket agents and booked directly onto their flights out of Anchorage. Their luggage is checked through to their hometowns and they board a bus headed directly to the airport. Thus, Holland America reports that passengers spend $0.5 million on purchased tours and excursions in Seward, whereas in Juneau they spend more than $20 million.

Bypass is important because it represents potential demand for public land resources and the recreation and tourism products produced from using those resources. Currently more than 400,000 recreation visitor days (RVDs) are generated by people driving through the Chugach National Forest. What if some significant percentage of these people were to stop somewhere along the way? Why might they do so? The opportunities for entrepreneurs are significant.

Viewed more broadly, the large pool of visitors to Anchorage represents similar growth potential. The Anchorage Convention and Visitors Bureau (1998) conducted surveys of visitors to Alaska's largest city and found that the average length of stay in Anchorage is about 4 days. In 1997, 20

percent of these Anchorage visitors engaged in hiking, 20 percent fished, and 13 percent went flight seeing. These visitors had an average household income of $86,000 and were highly educated. Because the total pool of visitors spending time in Anchorage approached 700,000 people, even minor shifts in these people's preferences or a better match between their existing preferences and available recreation "products" could result in major increases in visits to the Chugach National Forest.

One example of how "bypass" may give way to activity time is the rise in nonresident family travel. Although families are not currently well represented among nonresident tourists, many observers feel that this situation is changing. Younger people now have the money to make initial visits to Alaska, and many of them are returning as more independent, more adventurous travelers. Inevitably, these younger people are more likely to have children in tow. Many operators we interviewed felt strongly that the returning visitor is more likely to get off the beaten path and to seek the soft-adventure experience. These returning visitors are less likely to bypass the Chugach National Forest than they may have been on an initial visit.

Initially, we wondered whether visitor saturation at popular national parks might cause spillover effects as frustrated visitors sought other back-country areas. The Chugach National Forest is a prime candidate to receive these spillover recreationists because it is road-accessible and close to Anchorage. Although definitive conclusions are not possible without survey data, it seems clear that Denali occupies a unique niche as a wildlife viewing mecca, whereas Wrangell-St. Elias has plenty of excess capacity for back-country experiences. Thus, neither of these parks is likely to be a source of spillovers onto the forest. However, it is plausible to assume that the increasing crowding of the Exit Glacier area at Kenai Fjords National Park will push visitors onto nearby Chugach National Forest trails such as Lost Lake Trail.

Outlook for the Future

Most observers see a period of moderate steady growth ahead for tourism and recreation in south-central Alaska. Some soft-adventure operators see their particular activities reaching plateaus and wonder what new adventures will fuel the next boom. Few, if any, observers think that decline or a continuation of early-1990s growth rates will likely occur over the next 5 years. The unanimity of this outlook is remarkable considering how much the industry has changed and grown during the past decade.

A recent issue of *Alaska Economic Trends* (Alaska Department of Labor 1999) highlights the healthy outlook for the Kenai Peninsula. It cites "new attractions, such as the Seward Sealife Center, healthy fish resources, more lodging options, and growth in cruise ship dockings" as engines of continuing growth. This assessment of the Kenai as a center of growth is echoed by key participants in the industry.

Most of our interview sources agreed that the Whittier road will not cause a major change in travel patterns, at least within the next 5 years. Most feel that weak infrastructure could discourage visitors in the near term, and most are planning to use proven adaptive management techniques in response to the unfolding future. Our beach use data suggest that some of the most popular back-country destinations are not yet saturated in the minds of the users despite dramatic growth in use during the past decade. Several sources also have suggested that the Prince William Sound is fundamentally different from southeast Alaska in ways that make intimate cruises and widespread landings on the beaches less likely.

Although senior cruise line executives have made no commitments to Whittier, the road puts the community in a position to pick up any increases in Gulf of Alaska cruise ship activity. Hansen (1994) cites several industry sources and other analysts as stating that southeast Alaska dock space is effectively full and that Seward reached its maximum dock capacity, about 90 vessels per

year, in 1994. Over the next decade, therefore, capacity constraints in southeast Alaska could serve to channel growth in the demand for Alaska cruises toward the Gulf of Alaska. Absent new dock capacity in Seward, this situation would leave Whittier poised to pick up the increases. According to Hansen, Whittier has technical and cost advantages compared to Seward.

Throughout this report we have attempted to point out reasons why active recreation and tourism may grow on the Chugach National Forest. We emphasized these possibilities because soft-adventure activities are land-intensive; more demand for soft adventure means more challenges for forest managers.

Having emphasized the potential for growth and change in the activity mix, it is important to remember that the Chugach National Forest will continue to be highly valued for its special combination of roadways, marine passages, and spectacular scenery. Whether they are on a once-in-a-lifetime trip or driving back to Anchorage after a business trip to Seward, people enjoy and value the forest for its unparalleled viewable scenery. Whatever else happens to demand and activity patterns, viewing scenery will probably remain the principal recreational activity on the forest for the next decade.

There is a huge pool of people currently traveling through the Chugach National Forest.[1] Many of them are aging, active, wealthy baby boomers. There is also an expanding corps of eager entrepreneurs, many working in partnership with each other, who are seeking new ways to slow these travelers for a few hours or a day, or to entice them away from Anchorage. Should these entrepreneurs be successful in diverting even a small fraction of these people onto the forest, many commercially mediated recreation activities could grow rapidly.

For example, some smaller cruise ships[2] use Seward as a port of call rather than a terminus. This implies structured time for shore excursions. If this trend accelerates, then pressure on the forest for quick, intense activities such as rafting and helicopter-supported hiking and flight-seeing could increase dramatically. Of course, such pressures would be shared by Kenai Fjords National Park to the west of town. But the park is fundamentally marine; people coming off ships will likely want to be firmly on the ground.

Many have called the Chugach National Forest a well-kept secret in Anchorage's backyard. It is unlikely that a forest with so much to offer can remain largely undiscovered in an era of increasing demand for soft-adventure activities promoted by an energetic industry. Forest managers have an important role to play in guiding the discovery process.

[1] The same phenomenon applies, with less force, in other areas of south-central Alaska. For example, the small communities on the Glenn Highway between Palmer and Glenallen or on the Parks Highway between Palmer and Denali Park are close to some spectacular hiking, climbing, and snowmachining opportunities. Some communities, such as Talkeetna, are relatively successful at not being bypassed by the tourism traffic on these roads.

[2] Such as Cunard's *Sagafjord* and *Universe*.

English Equivalents

When you know:	Multiply by:	To find:
Kilometers	0.62	Miles
Hectares	2.47	Acres

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Appendix 1: Notes on Specific Data Sources

National Parks

Coverage: Visitor data (the number of visitors) for national parks in south-central Alaska, plus Denali. South-central Alaska parks are Katmai, Kenai Fjords, Lake Clark, and Wrangell-St. Elias.

Sources: National Park Service (NPS) Offices in Anchorage, AK, and Denver, CO (Street 1999), and various NPS officials.

The data are in Excel and dbase format.

Variables

For all five parks, we have data pertaining to recreational visitors,[1] nonrecreational visitors, recreational and nonrecreational visitor hours, lodging overnight stays, campground overnight stays, back-country overnight stays, and miscellaneous overnight stays.[2]

Individual Parks

The amount of data collected in each park differs greatly. Denali National Park has the most comprehensive data collection system.[3] Data for Denali and Kenai Fjords are available from 1992 to 1998.[4] Katmai National Park has data on day and overnight use by area and visitor transportation mode for 1997 and 1998. Wrangell-St. Elias reports visitors to each ranger station and the visitor center for 1996 through 1998. Lake Clark does not report any data.

[1] For Denali and Katmai, coverage is from 1980 through 1998. For Kenai Fjords, Lake Clark, and Wrangell-St. Elias, it is from 1982 through 1998.

[2] For these six variables, coverage is: Denali 1992–98, Kenai Fjords 1991–98, Wrangell-St. Elias 1994–98, Katmai and Lake Clark 1997–98.

[3] In addition to the list above, data are collected for overnights at each campground by tent or RV, number of people taking tours by type of tour, transportation mode of entry, and number of mountain climbers.

[4] Kenai Fjords National Park collects data on visitor center, public use cabins by cabin, tent and RV overnights at Exit Glacier, back-country day use, boat tours, and snowmobiles.

Data Collection Methods and Reliability

Denali—In 1996, the data collection system changed from a traffic-based counter, which picked up local traffic and people working in the park, to one based on tour ticket sales. To calculate visitor hours,[5] each person entering the park is given 10 hours, then people counted in the campground receive an additional 14 hours, back-country an additional 24 hours, and so forth. This system also changed in 1996. Before 1996, each car was assigned 2 hours, and other activities were added (Street 1999).

Katmai—Visitor data is collected at several points. At Brooks Camp, arrival sheets are used and arrivals are recorded by commercial operator. In addition, people need advance reservations if they are going to Brooks Camp. Back-country users going to Valley of 10,000 Smokes need to go to Brooks camp and are counted there. To get to other areas, people can go directly from King Salmon. At the American River and along the coast, rangers keep track of visitors (Crooks 1999). Overnight visitation at Brooks Camp is limited to 60 in the lodge and 60 in the campground. Both are full in July and September, but there is no limit to day use. The maximum stay is three nights in the lodge and seven nights in the campground. Some visitors combine lodge and campground use. Average campground stay is four nights. There are as many as 240 day-use visitors per day. Most visitors stay in King Salmon or in lodges in area. Back-county use has remained steady (Crooks 1999).

Kenai Fjords—Visitor data have been based on fees collected at the ranger station at Exit Glacier since 1998. Before 1998, data were collected by using a traffic counter at Exit Glacier with assumptions about the number of people per car (Quinley 1999). Data also are based on reports from the visitor center and rangers.

[5] These data do not show the drop in hours that was noted by Quinley (1999) because of collection estimation methods.

Lake Clark—Monthly visitor data are conservative estimates. Data collectors base their numbers on observations from concessionaires and air taxis. The reported visitor hours are a "wild guess" (Knuckles 1999). Park officials estimate most people stay 3 to 4 days. Although the data show a drop in recent years, officials think the number of visitors has risen generally over the past 10 years. Most of their visitors are hunters and fishermen. There is a small but increasing amount of back-country use.

Wrangell-St. Elias—Data are collected by using counts from ranger stations and visitor centers and reports from air taxis and other operators. Counting methods as well as the way hours were assigned to visitors, changed in 1996. Prior to 1996, every visitor was assigned 12 hours; now this has been increased to 46 hours (Street 1999).

In 1998, the recorded number of back-country users dropped from 27,000 to 4,600, but this is a reflection of the change in the method of counting back-country users. Before 1998, everyone who got off the road was considered a back-country user.

Alaska State Parks

Coverage: Monthly for 1990 to 1998 by region (northern, Mat-Su, Chugach, Kenai, Kodiak, Wood-Tikchik, southeast) and within region by "unit" (campgrounds, picnic areas, trailheads).

Source: Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation.

Format: Excel files of 1990 to 1998 totals of resident and nonresident visitors by region. Excel files of selected areas that were recommended by parks officials (Eklutna, Deep Creek, Big Lake, Nancy Lake, Northern Region). Data for other areas are in hard copy.

General Notes

The numbers indicate a decrease in visitors over the last 10 years, but according to park officials this is not true, and the apparent decrease probably results from an adjustment to data collection methods. Regardless of the year, some parks made an adjustment, whereas others did not. According to Reid (1999), early numbers are inflated. However, these numbers may be higher for some areas because there were far fewer campgrounds 10 years ago.

Data for 1997 and 1998 are more precise.

Chugach State Park

According to Alaska State Parks staff, the Chugach State Park data are "very weak" (Meiners 1999). Collecting visitor data is a low priority. They have neither the budget nor the manpower to do it.

According to Meiners (1999), most of the numbers are estimates. The actual number could be 20 percent higher or lower. The data for Eklutna Lake State Park are the most accurate. Most of the Eklutna numbers are from counters. For estimating resident and nonresident split, in some places license plates are counted, in other places an estimate of 20 percent nonresident is used.

According to Kathryn Reid (1999), data for the northern region (Fairbanks, Delta, Tok) are the most accurate state parks data because they use mechanical counters.

Comments on Use of the Chugach State Park

The most crowded areas are Flattop and Glen Alps. User fees showed it was even more crowded than park managers thought. User fees total $100,000 per year. On some days, $1,000 is collected from the deposit boxes at Flattop and Prospect Heights, which equates to 200 vehicles.

In summer, nonresidents probably make up about 40 percent of Flattop visitors. There is some displacement into more remote areas but not much. Flattop just gets more crowded. On any given day, 300 people climb Flattop. Most people, however, just drive in, walk to the overlook, and drive away.

Back-country use dropped in the 1980s but has been increasing in recent years. Use of Crow Pass is increasing.

Eklutna is used mostly by residents. The 8-mile dirt road deters tourists who are pulling trailers or driving RVs. Eklutna is full on the weekends but not during the week; this is a sign of resident rather than nonresident use.

There is easy access to Eagle River Campground from the highway, and it is packed all summer. Lots of nonresidents use this campground

Bird Campground has a steady level of nonfishing use but is crowded during the fishing season.

Kenai

These data come from rangers at Deep Creek who count cars in the campground and day use areas and keep track of in-state and out-of-state licenses.

A ranger at the campground did not feel the trend in the data—a decline over 10 years—was accurate. She said Deep Creek is not at capacity all summer but does have a high volume of use. There are lots of activities associated with Deep Creek. If it is not full of fishermen, it draws other crowds (clamming, all-terrain vehicle use, tractor launch for deep-sea sport fishing). She thinks the out-of-state visitors are declining. Fishing use has increased over the last 10 years.

Business License Data

Coverage: The business license data files are for January 1989, May 1993, and December 1998. Combined, these files contain about 160,000 records. The file with a subset of tourism-related business licenses for all 3 years has about 25,000 records.

Source: Alaska Department of Community and Economic Development, Division of Occupational Licensing.

Format: SPSS.

General Notes

The addresses in the file are those of the business owner, not the establishment. This affects our regional analysis. There is an "outside Alaska" region that includes all businesses headquartered outside of Alaska. Business licenses in Anchorage may be overcounted. Some business operators in rural Alaska report Anchorage as a permanent address. Business licenses in Denali may be undercounted because there is a large share of corporate-owned businesses there.

A business license does not necessarily mean there is a corresponding business.

Business license data give the most accurate picture for subsectors and regions dominated by small businesses (partnerships and sole proprietorships), where increased numbers of new businesses are a good reflection of overall business growth.

Business license holders self-report their standard industrial classification (SIC) codes. The data indicated businesses that offer more than one service (restaurant and hotel and grocery) reported as a restaurant in 1 year and a hotel in the next.

According to staff at the Alaska Department of Community and Economic Development, business license numbers are reassigned if there are any changes in a business (name, incorporation, and ownership). This makes it difficult to use the business license data to track turnover in tourism businesses.

Coding by Standard Industrial Classification

In 1989 and 1993, business license holders self-reported 4-digit SICs. In 1998, they reported a 2-digit rather than 4-digit code. Also in 1998, the department stopped using SIC codes and started using a line-of-business reference, which is a coding system based on occupation rather than industry.[6] There is not a one-to-one

[6] Line-of-business coding is better for tracking tourism than SIC coding. In the line-of-business codes, there are occupation codes related to tourism (i.e., hunting guide, fishing guide). In the SIC codes, there is no category for guides. Using the SIC codes, guides report as tour operators, unscheduled air or water transportation, bus charters, or miscellaneous amusement and recreation.

correspondence between systems. Because of the changes in the 1998 data, the analysis was done by using 2-digit codes.

Subsectors Related to Tourism

Although the line-of-business coding can be used to track tourism better than SIC coding, we used SIC codes for this analysis because most of the data were coded by SIC.

We recoded the line of business information from the 1998 data into SIC codes. We then used 2-digit SICs to analyze business licenses related to tourism. To determine which 2-digit SICs to use, we selected 4-digit SICs related to tourism from the Standard Industrial Classification Manual. Then using the 1989 and 1993 data, we chose 2-digit SICs if the relevant 4-digit SICs made up a sizable share of the 2-digit subsector.

For miscellaneous categories, we looked at the raw data and included them if a large portion of the business names appeared to be tourism related. This was the case for amusement and recreation.

Following are the subsectors chosen for analysis and the mix of businesses in each: [7]

- Local and interurban passenger transit (SIC 41):
  - Taxis (about 70 percent)
  - Bus charters (about 8 percent)
  - School buses (about 7 percent)
  - Local and suburban passenger transit—no detailed information provided (about 13 percent)
- Transportation by air (SIC 45):
  - Scheduled and unscheduled flights (about 50 percent)
  - Airports and services (about 50 percent)
- Transportation services (SIC 47):
  - Travel agents and tour operators (about 64 percent)
  - Freight transportation arrangement (about 7 percent)
  - Miscellaneous transportation (25 percent)
- Eating and drinking places (SIC 58):
  - Eating (about 83 percent)
  - Drinking (about 17 percent)
- Hotels and other lodging places (SIC 70):
  - Hotels and motels (about 45 percent)
  - Rooming and boarding houses (about 30 percent)
  - Camps and RV parks (about 25 percent)
- Auto repair, services, and parking (SIC 75):
  - Truck, auto, RV rental (about 14 percent)
  - Auto repair (about 70 percent)
  - Carwash and other nonrepair services (about 16 percent)
- Amusement and recreation (SIC 79):
  - Entertainers (about 13 percent)
  - Fitness centers, golf courses, bowling centers, dance studios (about 11 percent)
  - Miscellaneous amusement and recreation (about 76 percent) — the raw data show that nearly all (99 plus percent) businesses in this category are guides, charters, or outfitters.

[7] The "food stores" sector is not included because (1) it is dominated by large corporations and hence the business license data do not accurately reflect business location, and (2) the food stores sector also looks different in the wages and employment data. Wages and employment data show a peak in the fourth quarter. Other tourism sectors peak in the third quarter. Changes over 10 years could be due to many factors (increased population, increased income, tourism); it is extremely difficult to sort out the effects of tourism alone.

Regions

We divided Alaska into regions based on ZIP Code. The regions begin with all towns and cities located within or adjacent to the Chugach National Forest, which we denote as the "forest" region, and extend outward to the rest of the state.

Forest region:
- Cooper Landing
- Cordova
- Girdwood
- Hope
- Moose Pass
- Seward
- Tatitlek
- Valdez
- Whittier

Kenai region:
- Anchor Point
- Clam Gulch
- Fritz Creek
- Point Graham
- Kasilof
- Kenai
- Nikiski
- Ninilchik
- Seldovia
- Soldotna
- Sterling

Other south-central Alaska regions:
- Copper Center
- Chitina
- Gakona
- Glennallen

Mat-Su region:
- Palmer
- Big Lake
- Wasilla
- Skwentna
- Sutton
- Talkeetna
- Trapper Creek
- Wasilla
- Willow
- Houston

Denali region:
- Clear
- Cantwell
- Healy
- Anderson
- Denali National Park

Anchorage, other Alaska, and outside of Alaska are self-explanatory.

Appendix 2: Interview Participants

Table 19—Interview group 1: small recreation and tourism operators and their primary products

	Activities																			
Base location	Rafting	Biking	Mountaineering	Sea kayaking	Sailing	Whitewater kayaking	Canoeing	Mountan biking	Road biking	Scuba diving	Fishing	Ice climbing	Dog mushing	Heli-skiing	Cross-country skiing	Outdoor education	City tours	Camping	Charter/transport	Lodging
Anchorage		X															X			
Anchorage	X	X	X	X						X		X			X	X				
Anchorage	X																			
Anchorage		X							X										X	X
Anchorage	X	X		X		X	X								X			X		
Anchorage	X	X		X					X		X							X	X	X
Anchorage	X	X		X														X		
Anchorage	X					X												X		
Chickaloon	X	X		X				X										X		
Cooper Landing	X	X									X									
Copper Center	X	X																X		
Cordova		X																	X	X
Eklutna		X		X					X									X		
Gakona	X										X							X		
Girdwood											X			X					X	
Girdwood	X			X		X												X		
Kasitsna Bay		X		X				X												X
Knik Glacier	X	X		X				X											X	X
McCarthy	X	X																X		
McCarthy	X	X	X								X	X						X		
Palmer			X	X								X				X		X		
Seward	X		X	X												X		X		
Seward		X		X														X		
Valdez				X														X		
Valdez														X					X	X
Valdez		X		X	X													X		X
Valdez		X		X	X													X	X	
Wasilla													X					X		X
Whittier																			X	
Whittier				X	X													X		
Whittier				X						X									X	
Willow													X		X			X		X

Table 20—Interview group 2: community residents, larger operators, and government

Date	Community	Person	Affiliation
1999:			
June 8	Seward	Peter Fitzmaurice, chief ranger	Kenai Fjords National Park
June 8	Seward	Mike Calhoun, VP, Board of Directors	Seward Chamber of Commerce
June 8	Seward	Marilee Koszowski	Bed and Breakfast (B & B) operator
June 9	Seward	Ben Ellis, development director	Alaska SeaLife Center
June 9	Seward	Jim Beckham, harbormaster	City of Seward
June 9	Seward	Richard Nelson, general manager	Chugach Heritage Center
June 9	Seward	Tom Tougas, manager	Kenai Fjords Tours
June 15	Hope	Linda Vathke, lodging operator	Bear Creek Lodge
June 15	Hope	Susan Anderson, Hope merchant/ resident	The Hope Chest
June 15	Hope	Fayrene Sherritt, B&B operator	Hope Gold Rush B & B
June 15	Hope	Hugh Moore and Bud, miners	Residents
June 15	Hope	Linda Lu Graham, postmaster	Postal Service, Hope, AK
June 15	Hope	Charlie Owen, campground host	Porcupine Campground
June 15	Hope	John, campground manager	Porcupine Campground
June 16	Moose Pass	Chris McKern, manager	Summit Lake Lodge
June 16	Hope	Sally Youngberg	Resurrection Trail Resort
June 16	Kenai NWR	G. George, ranger	U.S. Fish and Wildlife Service
June 16	Cooper Landing	Suzy Crosby, manager	Russian River Campground
June 16	Cooper Landing	Darwin Peterson	Kenai Cache
June 17	Cooper Landing	Dan Michaels	Kenai Princess Lodge
June 17	Moose Pass	Leora Cox	Estes Grocery
June 17	Moose Pass	Jackie Sewell	AK Nellie's B & B
June 17	Moose Pass	Mike Gunter, manager	Trail Lake Lodge
June 17	Moose Pass	Mrs. Leary	Grandma Leary's B & B
June 17	Moose Pass	Lura Kingsford	Scenic Mountain Air
June 28	McCarthy	Betty Hickling, owner/manager	McCarthy Lodge
June 28	McCarthy	Kelly Bay	Wrangell Mountain Air
June 28	McCarthy	Jeannie Miller	Tailor-made Pizza
June 28	McCarthy	Gary Green	McCarthy Air
June 29	Kennicott	Chris Richards	Kennicott-McCarthy Wilderness Guides
June 29	McCarthy	John Adams	McCarthy B & B
June 30	McCarthy	Randy Elliott	The Tramstation
July 1	Anchorage	Grant Johnston, marketing director	Allen Marine Tours
July 1	Chitina	Art Koeninger	Spirit Mountain Artworks
July 2	Glenallen	Tamara Lozano, executive director	Greater Copper Valley Chamber of Commerce

Table 20—Interview group 2: community residents, larger operators, and government (continued)

Date	Community	Person	Affiliation
1999:			
July 8	Cordova	Bob Behrends	Cordova Ranger District, Chugach National Forest
July 8	Cordova	Dale Muma, harbormaster	City of Cordova
July 8	Cordova	Kim Erbey	Cordova Air Service
July 9	Cordova	Sandy King	King's Chamber B & B
July 9	Cordova	Margy Johnson	Reluctant Fisherman Inn
July 9	Cordova	Kristin Smith	Copper River Watershed Project
July 9	Cordova	Kelly Weaverling	Orca Book and Sound
July 9	Cordova	Becky Chapek	Real Estate; Northern Nights Inn, Copper River and Northwest Tours
July 26	Seward	Mark Stauble	Parks and Recreation, City of Seward
July 28	Cooper Landing	David Rhodes	
July 30	Anchorage	Christy Worrell, marketing director	Rust's Flying Service
Aug. 10	Girdwood	Kjerstin Lastufka, director of marketing	The Westin Alyeska Prince Resort
Aug. 10	Girdwood	Sylvia Stonebraker	Cross Country Meadows B & B
Aug. 10	Valdez	Matt White	Valdez Heli-Camps
Aug. 10	Anchorage	John Morris, manager	Alaska Public Lands Information Center
Aug. 13	Anchorage	Dennis McDonnell	Era Helicopters
Aug. 17	Anchorage/ Girdwoood	Rudi von Imhof	Alaska Snow Safaris/Alaska Outdoor Adventures
Aug. 17	Anchorage	Craig Porter	Alaskan Adventures Arctic Cat (snow machine sales and service)
Aug. 18	Whittier	Alan J. Sorum, harbormaster	City of Whittier
Aug. 18	Whittier	Suzanne B. Eusden, postmaster	Whittier City Post Office
Aug. 18	Whittier	June Miller	Bread N Butter Charters; June's Vacation Condo Suites
Aug. 18	Alaska Marine Highway	Lynn B. Olson	Alaska Marine Highway
Aug. 19	Girdwood	Elaine Gross, glacier ranger	USDA Forest Service
Aug. 19	Girdwood	Donna Jefferson	Alpine Air, Inc.
Aug. 19	Valdez	Lisa VonBargen, executive director	Valdez Convention and Visitors Bureau
Aug. 19	Valdez	Matt Cornell, tourism manager	Valdez Convention and Visitors Bureau
Aug. 19	Valdez	Marnie Goodridge	Chugach National Forest
Aug. 19	Valdez	Laura Saxe, owner	Eagle's Rest RV Park (also Event Coordinator for Valdez Snowmachine Club)
Aug. 19	Valdez	Tabitha Gregory, business manager	Valdez Museum

Table 20—Interview group 2: community residents, larger operators, and government (continued)

Date	Community	Person	Affiliation
1999:			
Aug. 19	Valdez	Dave Johnson	Valdez Tours—Alyeska Pipeline
Aug. 19	Valdez	Walt Woodrow, base manager/pilot	Era Helicopters
Aug. 20	Valdez	Name withheld	Tourism operator
Aug. 20	Valdez	Kyle Rennie	Marine equipment operator
Aug. 27	Seward	Donna Peterson, Alice Hall, Karen Kromrey, Karen O'Leary, Pat O'Leary, Shannon Skibeness	Seward Ranger District, Chugach National Forest
Sept. 21	Statewide	William Pedlar	Holland America-Westours, Inc.
Sept. 22	Statewide	Tom Dow	Princess Cruises
2000:			
Jan. 17	Statewide	Steve Planchon	Director of Land Policy, Alaska Mental Health Trust

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